MEDICAL DEVICE SINGLE AUDIT PROGRAM

AUDIT MODEL

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Foreword

The Medical Device Single Audit Program (MDSAP) is intended to allow competent auditors from MDSAP recognized Auditing Organizations (AOs) to conduct a single audit of a medical device manufacturer's quality management system that will satisfy the requirements of the medical device regulatory authorities participating in the MDSAP program.

Audits performed under the MDSAP program will be process based, focusing on several defined processes, a defined method for linking those processes, and built on a foundation of requirements for risk management.

Use of this document

This document contains specific instructions for performing audits under the MDSAP program. It incorporates an audit sequence and instructions for auditing each specific process. The document also provides links to highlight the interactions between the processes. The document additionally emphasizes the interrelationships to relevant risk management activities. Links to specific processes are noted in a "red" box if viewing a color version of the document, or are in gray boxes if viewing the black and white version. The interrelationships of risk management are also noted in the document and those are in "blue" and *this font*.

The MDSAP Audit Process Companion document is also available. That document is provided as a reference and includes additional detail regarding each audited process as well as guidance for assessing the conformity of each process. Please refer to the companion document as needed.

Medical Device Single Audit Program

Overview:

The Medical Device Single Audit Program (MDSAP) audit process was designed and developed to ensure a single audit will provide efficient yet thorough coverage of the requirements of Medical devices – Quality management systems – Requirements for regulatory purposes (ISO 13485:2016), the Quality Management System requirements of the Conformity Assessment Procedures of the Australian Therapeutic Goods (Medical Devices) Regulations (TG(MD)R Sch3), Brazilian Good Manufacturing Practices (RDC ANVISA 16/2013), Japan Ordinance on Standards for Manufacturing Control and Quality Control of Medical Devices and In Vitro Diagnostic Reagents (MHLW Ministerial Ordinance No. 169), the Quality System Regulation (21 CFR Part 820), and specific requirements of medical device regulatory authorities participating in the MDSAP program.

Audit Sequence:

The MDSAP audit sequence was designed and developed to allow for the audit to be conducted in a logical, focused, and efficient manner. The MDSAP audit sequence follows a process approach and has four primary processes: (1) Management; (2) Measurement, Analysis and Improvement; (3) Design and Development; (4) Production and Service Controls; and a supporting process, (5) Purchasing. The definition of each process includes a purpose and an outcome that are indicators of process performance. These five processes are built on a foundation of requirements for risk management and comprise the requirements of a quality management system for medical device manufacturers according to Medical devices – Quality management systems – Requirements for regulatory purposes (ISO 13485:2016), the Quality Management System requirements of the Conformity Assessment Procedures of the Australian Therapeutic Goods (Medical Devices) Regulations (TG(MD)R Sch3), Brazilian Good Manufacturing Practices (RDC ANVISA16/2013), Japan Ordinance on Standards for Manufacturing Control and Quality Control of Medical Devices and In Vitro Diagnostic Reagents (MHLW Ministerial Ordinance No. 169), and the Quality System Regulation (21 CFR Part 820).

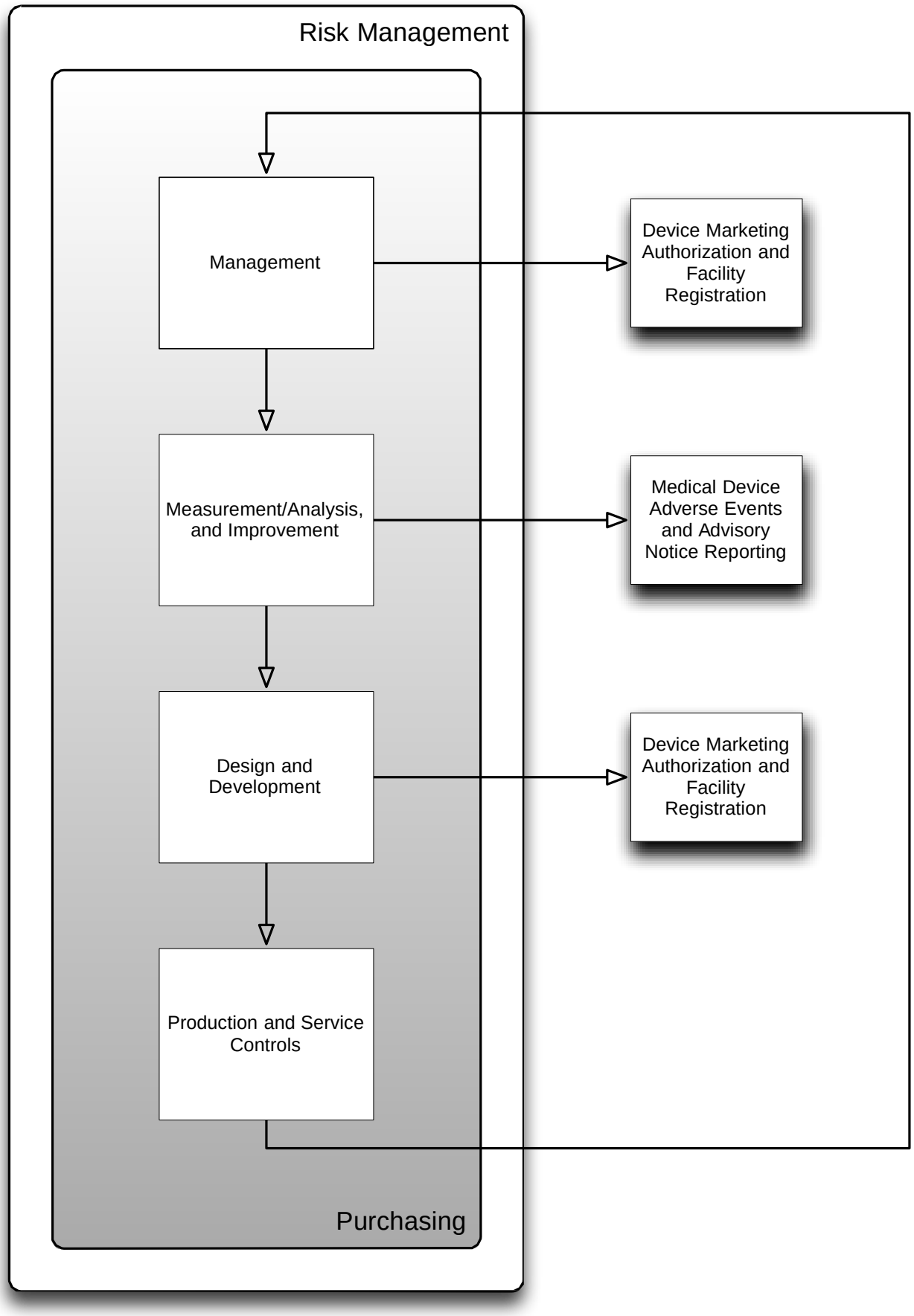
The MDSAP audit process has two additional supporting processes: (1) Device Marketing Authorization and Facility Registration and (2) Medical Device Adverse Events and Advisory Notices Reporting. These processes are necessary to fulfill specific requirements of participating MDSAP regulatory authorities.

The flowchart shown in the attached figure documents the MDSAP audit sequence and interrelationships. The MDSAP audit model was designed for the audit of the primary MDSAP processes in the following sequence: (1) Management (2) Measurement, Analysis and Improvement (3) Design and Development, and (4) Production and Service Controls processes. The Purchasing process (5) may be reviewed in conjunction with the Measurement, Analysis and Improvement process, the Design and Development process, and the Production and Service Controls process.

The design and implementation of an organization's quality management system is a strategic decision of an organization, based on the needs of the organization, the size of the organization, the processes employed, and the products provided. If the organization does not perform certain processes (e.g. Design and Development), then the organization's quality management system does not need to address such a requirement and the corresponding MDSAP process does not need to be audited. However, if the organization chooses to outsource any processes related to the design and/or manufacture of medical devices for which the organization has responsibility, these processes remain the responsibility of the organization and must be addressed within the organization's quality management system through monitoring, maintaining, and controlling the suppliers and

supplied processes. Similarly, in addition to the exclusions and non-applications permitted by ISO13485, the organization may exclude the requirements of markets where the organization does not intend to supply product. The audit scope and audit criteria must take into account any justified exclusions or non- applications. When an organization claims an exclusion from the requirements of a target market, the auditor should use caution when applying the guidance provided in the MDSAP processes. Some requirements may not be applicable.

Audit Sequence



Conducting the Audit:
During the audit of the organization's' quality management system as identified in the seven MDSAP processes, the audit team will be asked to be mindful of "linkages". In order for an organization's quality management system to function effectively, it has to identify and manage numerous interrelated (linked) processes in accordance with clause 4.1.2 (c) of ISO 13485:2016. The output of one process often directly forms the input of other processes, or the activities of a supporting process are relevant to other processes; therefore, linkages were built into the MDSAP audit sequence and audit tasks to remind the audit team of these interactions between the processes. For example, linkages assist auditors in making appropriate selections when moving to the next process (e.g. using information from the Measurement, Analysis and Improvement process to select a design project to review where appropriate).

The audit team is also asked to assess risk management activities during the audit of the organization's quality management system processes. Risk management is an integral aspect of an organization's quality management system and it is the responsibility of top management to provide the necessary commitment and resources for risk management. Effective risk management usually starts in conjunction with the design and development process, proceeds through product realization, including the selection of suppliers, and continues until the time the product is decommissioned. Risk-based decisions occur throughout the various quality management system processes, and each organization must decide how much risk is acceptable to ensure medical devices are as safe as practical.

Navigating the Audit Sequence:
Each MDSAP process will require the audit team to accomplish audit tasks to determine if the process outcomes and the process purpose are achieved. Following the audit process tasks, there are references to the applicable ISO 13485:2016 clause(s), the corresponding section(s) of the Quality Management System requirements of the Conformity Assessment Procedures of the Australian Therapeutic Goods (Medical Devices) Regulations (TG(MD)R Sch3), Brazilian Good Manufacturing Practices (RDC ANVISA 16/2013), Japan Ordinance on Standards for Manufacturing Control and Quality Control of Medical Devices and In Vitro Diagnostic Reagents (MHLW Ministerial Ordinance No. 169), the Quality System Regulation (21 CFR 820), and any unique requirements that pertain to a participating MDSAP regulatory authority. These references have been provided to assist the auditors in assuring that the requirements of all MDSAP participating regulatory authorities are addressed during the audit. The audit tasks are based on the requirements of Medical devices – Quality management systems – Requirements for regulatory purposes (ISO 13485:2016). The audit team is responsible for assessing conformity to the applicable clauses in ISO 13485:2016 as the audit tasks are being performed. Audit tasks that have one or more unique requirements pertaining to participating MDSAP regulatory authorities have a reference to ISO 13485:2016 clause 4.2.1 to include the requirements of 4.2.1(e), as well as the corresponding regulation of the regulatory authority.

The organization needs to demonstrate its ability to provide medical devices that consistently meet customer and regulatory requirements. During the audit, it is important that the auditors are mindful of any instances where the organization demonstrates failure to fulfill any of the requirements in ISO 13485:2016 or portion of the requirements listed in the audit activities and tasks, and that these nonconformities are recorded in appropriate detail. Particular attention should be paid to the potential interrelationship of the nonconformities observed. For example, audit findings in both purchasing controls and acceptance activities may indicate a significant nonconformity because

control over suppliers, and the products they supply, depends on an effective mix of both these activities, and deficiencies in one or the other may affect the quality of the finished device.

Whenever a MDSAP Audit Task requires an auditor to verify the identification and documentation of a requirement in QMS documentation, this verification should be performed as part of the pre-audit preparation and documentation review, as practical, to minimize on-site audit time and to increase the auditor's familiarity with the manufacturer's QMS.

Terminology:

Additionally, the term "device" is used throughout the MDSAP processes. For the purpose of applying the MDSAP processes, and to accommodate nuances in the regulatory systems of the participating Regulatory Authorities, the use of the term "device" is to refer to any product that is capable of functioning as a medical device, whether or not it is packaged, labeled, or sterilized. In some jurisdictions, such a product is defined as a "finished device". In other jurisdictions, a finished device is one that is intended to be used as a medical device and is at a stage where the product is ready to be placed on the market, or put into service, by the manufacturer whose name appears on the labelling.

Annexes:

Annex 1 contains specific information as to the expectations for audit of technical documentation, as specifically required by the Quality Management System requirements of the Conformity Assessment Procedures of the Australian Therapeutic Goods (Medical Devices) Regulations (TG(MD)R Sch3).

Annex 2 contains information as to the expectation for the audit of requirements for sterile medical devices.

MDSAP Audit Cycle:

The Medical Device Single Audit Program is based on a three (3) year audit cycle. The Initial Audit, also referred to as the "Initial Certification Audit" is a complete audit of a medical device manufacturer's quality management system (QMS) consisting of a Stage 1 Audit (17021:2015 – Cl 9.3.1.2) and a Stage 2 Audit (17021:2015 – Cl 9.3.1.3). The initial Audit is followed by a partial Surveillance Audit (17021:2015 – Cl 9.6.2.2) in each of the following two (2) years and a complete Re-audit, also referred to as a "Recertification Audit" (17021:2015 – Cl 9.6.3.2) in the third (3rd) year.

Special Audits (17021:2015 – Cl 9.6.4.2), Audits Conducted by Regulatory Authorities, and Unannounced Audits are potential extraordinary audits that may occur at any time within the audit cycle. Note: Not all MDSAP participating regulatory authorities require, or make use of, certification documents that relate to a medical device manufacturer's QMS. The terms "certification" and "recertification" appear within this document to maintain consistency with the terminology used within ISO/IEC 17021:2015 Conformity assessment – Requirements for bodies providing audit and certification of management systems.

The audit cycle of a quality management system for sterile medical device should include a comprehensive assessment of the control of the device sterility, generally during the initial/recertification audit. The surveillance audit, in the absence of changes significantly affecting the control of sterility, may be limited to the verification of the appropriate implementation of the validated process parameters; control and monitoring activities; and final product release. While some auditing activities can be

conducted remotely (e.g. review of the sterilization process validation report), remote activities alone cannot effectively ensure the comprehensive control of the device sterility. The outcome of such remote review activities must serve as input to the on-site audit and be incorporated or attached to the MDSAP audit report. The off-site assessment of the controls of the product sterility should not prevent the on-site audit team from following audit trails, including audit trails necessitating the review of documents that had previously been assessed remotely.

During the course of the audit cycle, all product families and significant processes should be assessed.

Initial Audit (Initial Certification Audit):

The "Initial" a.k.a. "Initial Certification" audit consists of a Stage 1 and a Stage 2 audit.

Stage 1 – Documentation review, evaluation of preparedness for Stage 2 audit, etc.

A Stage 1 audit shall be conducted in accordance with Clause 9.3.1.2 of ISO/IEC 17021-1:2015 and all applicable MDSAP Audit Process tasks and regulatory requirements.

From an MDSAP perspective, the primary purposes of a Stage 1 audit are (1) to determine if QMS documentation required by ISO13485:2016 - Clauses 4.2.1 and other applicable MDSAP documentation requirements have been adequately defined, and documented; (2) to assess the manufacturer's preparedness for a Stage 2 audit; (3) to provide a focus for planning a Stage 2 audit; and, (4) to collect information regarding the scope of the quality management system and other aspects of the manufacturer.

Portions of a Stage 1 audit (e.g. documentation review) may be performed at a site other than the site(s) of the manufacturer seeking initial certification.

The outcome of the Stage 1 audit will assist the MDSAP recognized auditing organization in its determination of the readiness of the manufacturer to undergo a Stage 2 audit. The Auditing Organization shall determine how best to accomplish tasks of Stage 1 and Stage 2 with regards to off-site record review and on-site verifications. Hence portions of a Stage 1 audit (e.g. documentation review) may be performed at a site other than the site(s) of the manufacturer seeking initial certification. In practice it is intended that the Auditing Organization may combine elements of Stage 1 and Stage 2 to allow for a single on-site visit to the manufacturer.

Stage 2 – Evaluation of QMS Implementation and Effectiveness

A Stage 2 audit shall be conducted in accordance with Clause 9.3.1.3 of ISO/IEC 17021-1:2015 and using all applicable MDSAP Audit Process tasks.

The purpose of a Stage 2 audit is to determine if all applicable requirements of ISO 13485:2016 and the relevant regulatory requirements from participating regulatory authorities have been implemented. Stage 2 audit objectives shall specifically include an evaluation of:

- the effectiveness of the manufacturer's QMS incorporating the applicable regulatory requirements;
- product/process related technologies (e.g. injection molding, sterilization);
- adequate product technical documentation in relation to relevant regulatory requirements; and,
- the manufacturer's ability to comply with these requirements.

As part of achieving these objectives, the auditor is to verify that the manufacturer maintains sufficient and reliable objective evidence to demonstrate its devices meet essential principles of safety, performance, and effectiveness and any other regulatory requirement identified in the audit tasks. This verification is to ensure that documentation and records required by the national regulations of the participating Regulatory Authorities are present, current, and complete. The auditor should expect that the documentation and records are maintained to demonstrate continued compliance with regulatory requirements during the post-market phase of the device life-cycle.
A Stage 2 audit shall be performed at all sites that will be recorded on the certificate. (Hence, any sites which are relevant to the manufacturer's quality management system but audited off-site, should not be recorded on the certificate.)

Surveillance Audits
(1st and 2nd Surveillance Audits):

A Surveillance Audit shall be conducted in accordance with Clause 9.6.2.2 of ISO/IEC 17021-1:2015 and using all applicable MDSAP Audit Process tasks.

The purpose of a series of surveillance audits is to assure that all applicable requirements of ISO 13485:2016 and the relevant regulatory requirements from participating regulatory authorities are audited during the cycle of a 3 year audit program for the manufacturer. Surveillance audit objectives during the audit cycle shall specifically include evaluation of:

- the effectiveness of the manufacturer's QMS incorporating the applicable regulatory requirements.
- new or changed product/process related technologies (e.g. injection molding, sterilization); and,
- new or amended product technical documentation in relation to relevant regulatory; and
- the manufacturer's ability to comply with these requirements.

In addition, surveillance audits shall include a review of issues related to medical device safety and effectiveness since the last audit such as complaints, problem reports, vigilance reports, and recalls/field corrections/advisory notices.

These objectives allow the MDSAP recognized auditing organization to maintain confidence that the QMS continues to meet requirements between re-audits (re-certification audits). The auditor should again expect that the documentation and records are maintained to demonstrate continued compliance with regulatory requirements during the post-market phase of the device life-cycle.

Surveillance audits do not require a Stage 1 audit unless significant changes have occurred since the last audit. For example, where there are QMS changes associated with new legislation, or legislative changes, or if otherwise deemed necessary by the auditing organization.

Each *individual* surveillance audit in the cycle need not cover all MDSAP requirements. However, as a minimum, each surveillance audit must address the following (as applicable):

i) A review of changes to the manufacturer, their QMS, or their products, since the previous audit
    - Note: changes may necessitate regulatory submissions

ii) The MDSAP Audit Process tasks that are associated with the:

- Management Process
- Measurement, Analysis, and Improvement Process
- Medical Device Adverse Event and Advisory Notice Reporting Process
- Device Marketing Authorization and Facility Registration Process.
    - Note: auditors are to confirm that the marketing authorization of products remains in effect.
- Design and Development Process
    - Note: If audit trails do not indicate a necessity to audit Design and Development further, the audit of Design and Development may be limited to verifying that the manufacturer maintains objective evidence to demonstrate its devices meet essential principles of safety, performance and effectiveness; with emphasis on new devices introduced since the previous audit.
    - Note: The verification of objective evidence is to ensure that the documentation and records required by the national regulations of the participating Regulatory Authorities are present, current and complete. The documentation and records are required to be maintained during the post-market phase of the device life-cycle.
    - Note: Where there are indicators of existing or potential nonconformities in the data, or other information observed during a surveillance audit that suggest that such nonconformities have not been adequately addressed by the manufacturer's QMS, an audit of the Design and Development Process and/or the Production and Service Controls Process should focus on those indicators of existing or potential nonconformities.
    - Note: If the first surveillance audit includes the Design and Development Process, the second surveillance should include the Production and Service Controls Process (or vice-versa) unless further indicators of existing or potential nonconformities dictate otherwise.

Guidance on the selection of samples of data for the audit of the processes in i) and ii) above is provided within the relevant tasks of those MDSAP Audit Processes. The selection should be limited to the data that is germane to the processes in i) and ii) above.

For a surveillance audit, the Purchasing Process need only be audited if necessary to adequately audit other QMS processes or when there are indicators of existing or potential nonconformities involving purchased products and services.

Re-audit (Recertification Audits):

A Re-audit (Recertification Audit) shall be conducted in accordance with Clause 9.6.3 of ISO/ IEC 17021-1:2015 and using all applicable MDSAP Audit Process tasks.

The purpose of a re-audit is to confirm the continued relevance, applicability and suitability of the organization's QMS (as a whole), to satisfy all applicable requirements of ISO 13485:2016 and the

relevant regulatory requirements from participating regulatory authorities, with respect to the scope of certification. Recertification audit objectives shall specifically include evaluation of:

- the effectiveness of the manufacturer's QMS incorporating the applicable regulatory requirements;
- product/process related technologies (e.g. injection molding, sterilization);
- adequate product technical documentation in relation to relevant regulatory requirements; and,
- the manufacturer's continued fulfillment of these requirements.

Re-audits do not require a Stage 1 audit unless significant changes have occurred since the last audit. For example, where there are QMS changes associated with new legislation or legislative changes, or if otherwise deemed necessary by the auditing organization. If there have been significant changes to the QMS, Auditing Organizations shall review the documentation that implements those changes in accordance with Clause 9.6.3.1.3 of 17021-1:2015. Re-audits may be shorter than initial audits through selective and focused sampling.

As part of achieving the objectives for a Re-Audit, an auditor shall verify the requirements of ISO/IEC 17021-1:2015 Clause 9.6.3.2.1, and the following, where applicable:

i) A review of the MDSAP audit reports for the current audit cycle. That is, those prepared since the initial audit or previous re-audit.
ii) A review of changes to the manufacturer, QMS, or products since the previous surveillance audit
iii) A follow-up of corrections and/or corrective actions stemming from the findings of the previous MDSAP audit, of any kind.
iv) A review of the effectiveness and suitability of the manufacturer's QMS over the current audit cycle
v) All applicable MDSAP Audit Process tasks. The audit of the processes and the sampling should focus on the following (based on risk):
    a. Previously identified potential and existing nonconformities
    b. new or modified designs and new products
    c. new or modified processes
    d. areas not sufficiently covered during the surveillance period

During a recertification audit, the Auditing Organization shall audit all sites that are recorded on the certificate. (Hence any sites which are relevant to the manufacturer's quality management system but audited off-site, should not be recorded on the certificate.)

Special Audits:

Special audits are extraordinary audits in that they are not part of the planned audit cycle. These audits should only be used when necessary and should focus on specific elements of the manufacturer's QMS.

Special audits may include audits conducted in response to an application for the extension to the scope of an existing certification, to determine whether or not the extension can be granted or as short-notice audits conducted to investigate potentially significant complaints, or if specific information provides reasons to suspect serious non-conformities of the devices, or for other reasons.

Short-notice audits may be conducted at the request, and under the direction, of the MDSAP participating regulatory authorities or at the discretion of the auditing organization.

Special audits should be conducted in accordance with the applicable requirements of ISO/IEC 17021-1:2015 Clause 9.6.4 as well as any additional requirements of the MDSAP recognized auditing organization and/or the MDSAP participating regulatory authorities (where applicable).

Special audits should be used to address, as applicable:

i) The need to extend the scope of the audit or certification of the manufacturer to include new or modified products between regularly programmed audits

ii) A shortfall in oversight by the MDSAP recognized auditing organization. For example, due to insufficient audit time, inappropriate audit team constitution, etc.

iii) To follow up on specific post-market issues. For example, for potentially significant complaint.

iv) To follow up on significant findings from a previous MDSAP audit

v) At the request of an MDSAP participating regulatory authority (based on a specific assignment)

vi) To conduct supplier audits as dictated by regulatory authority or auditing organization policy

An Auditing Organization that performs a special audit at the request of the recognizing Regulatory Authority(s) shall submit the audit report to the recognizing Regulatory Authority(s) within 15 days from the last day of the audit.

Unannounced Audits

Another type of Special Audit is the unannounced audit. The MDSAP participating regulatory authorities require Auditing Organizations to conduct unannounced audits in circumstances where high grade non-conformities have been detected. See IMDRF/MDSAP WG/N3 Final: 2016 (Edition 2) for criteria.

Audits Conducted by Regulatory Authorities

Audits may be conducted by MDSAP participating regulatory authorities at any time and for a range of reasons *including* (1) "For Cause" due to information obtained by the regulatory authority, (2) as follow up to the findings of a previous audit, and (3) to confirm the effective implementation of MDSAP requirements by MDSAP recognized auditing organizations.

The purpose of audits conducted by regulatory authorities is to assure appropriate oversight of the MDSAP recognized auditing organization's audit activities, or to assess manufacturers that have been identified as potentially problematic.

Medical Device Single Audit Program

Chapter 1
Process: Management

The Management process is the first process to be audited per the MDSAP audit sequence.

Auditing the Management Process

Purpose: The purpose of auditing the Management process is to verify that top management ensures that an adequate and effective quality management system has been established and maintained. The management processes should be re-evaluated at the end of the audit to determine whether top management has demonstrated the necessary commitment for an effective quality management system that has been communicated to personnel.

Outcomes: As a result of the audit of the Management process, objective evidence will show whether the organization has:

A) Identified processes needed for the quality management system, their application throughout the organization, and their sequence and interaction

B) Defined, documented, and implemented procedures and instructions to ensure the development and maintenance of an effective quality management system

C) Established quality objectives at relevant functions and levels within the organization consistent with the quality policy and ensured that these are periodically reviewed for continued suitability

D) Determined the criteria and methods needed to ensure the operation and control of quality management system processes, including the identification and management of interrelated processes

E) Committed the appropriate personnel and resources for infrastructure to the quality management system

F) Assigned responsibility and authority to personnel and established the organizational structure to ensure processes assuring quality are not compromised

G) Performed risk management planning and ongoing review of the effectiveness of risk management activities to ensure that policies, procedures and practices are established for analyzing, evaluating and controlling risk

H) Ensured the continued effectiveness of the quality management system and its processes

I) Established a quality management system which is capable of producing devices that are safe, effective and suitable for their intended use

Links to Other Processes: Measurement, Analysis and Improvement; Design and Development; Purchasing; Production and Service Controls; Device Marketing Authorization and Facility Registration

Audit Tasks and Links to Other Processes:

1. **Confirm that quality management system planning is performed to ensure that all required processes are identified, documented, implemented, monitored and maintained in order to conform to the applicable requirements and meet quality objectives. Verify that changes to the quality management system are managed to maintain the conformity of the quality management system and of the devices produced. Verify that a quality manual has been documented.**

   Clause and Regulation: [ISO 13485:2016: 4.1.1, 4.1.2, 4.1.3, 4.2.2, 4.1.4, 5.4.2; TG(MD)R Sch3 P1 1.4(4); RDC ANVISA 16/2013: 2.1, 5.6; MHLW MO169: 5, 7, 14; 21 CFR 820.20]

   Additional country-specific requirements: None

Links: Measurement, Analysis and Improvement; Design and Development; Purchasing; Production and Service Controls; Device Marketing Authorization and Facility Registration
During the audit, whenever a change is identified, verify that the organization has implemented appropriate change controls.

2. **Confirm top management has documented the appointment of a management representative. Verify the responsibilities of the management representative include ensuring that quality management system requirements are effectively established and maintained, reporting to top management on the performance of the quality management system, and ensuring the promotion of awareness of regulatory requirements throughout the organization.**

   Clause and Regulation: [ISO 13485:2016: 5.5.2; TG(MD)R Sch3 P1 1.4(5)(b)(ii); RDC ANVISA 16/2013: 2.2.5; MHLW MO169: 16; 21 CFR 820.20(b)]

   Additional country-specific requirements: None

3. **Verify that a quality policy and objectives have been set at relevant functions and levels within the organization. Ensure the quality objectives are measurable and consistent with the quality policy. Confirm appropriate measures are taken to achieve the quality objectives.**

   Clause and Regulation: [ISO 13485:2016: 5.3, 5.4.1; TG(MD)R Sch3 P1 1.4(5)(a); RDC ANVISA 16/2013: 2.2.1; MHLW MO169: 12, 13; 21 CFR 820.20(a)]

   Additional country-specific requirements: None

4. **Review the manufacturer's organizational structure and related documents to verify that they include provisions for responsibilities, authorities (e.g., management representative), personnel, resources for infrastructure, competencies, and training to ensure that personnel have the necessary competence to design and manufacture devices in accordance with the planned arrangements and applicable regulatory requirements.**

   Clause and Regulation: [ISO 13485:2016: 5.1, 5.5.1, 5.5.2, 6.1, 6.2; TG(MD)R Sch3 P1 1.4(5)(b); RDC ANVISA 16/2013: 2.2.2, 2.2.3. 2.2.4, 2.3; MHLW MO169: 10, 15, 16, 21, 22, 23; 21 CFR 820.20(b), 820.25]

Additional country-specific requirements: None

5. Determine the extent of outsourcing of processes that may affect the conformity of product with specified requirements and verify the proper documentation of controls in the quality management system.

Clause and Regulation: [ISO13485:2016: 4.1.5, 4.2.1; TG(MD)R Sch3 P1 1.4(5) (b)(iii), (d)(ii); RDC ANVISA16/2013: 2.5; MHLW MO169: 5, 6; 21 CFR 820.50]

Additional country-specific requirements:

Australia (TGA):

If an Australian Sponsor undertakes an activity that is outsourced by the manufacturer, or required, to be under the control of the manufacturer, verify that the roles and responsibilities of the Australian Sponsor are documented in the manufacturer's quality management system and that the Sponsor is qualified and controlled as a supplier. For example, but not limited to; a labeling activity to ensure that the name and address of the Australian Sponsor accompanies the device [TG(MD)R Reg 10.2], the installation of a device, or the servicing of a device.

Canada (HC):

Verify that the roles and responsibilities of any regulatory correspondents, importers, distributors, or providers of a service are clearly documented in the organization's quality management system and are qualified as suppliers and controlled, as appropriate.

Link: Purchasing
During audit of the firm's Purchasing process, ensure that management has assured the appropriate level of control over suppliers, including an assessment of the relationship between supplied products and product risk.

6. Confirm the organization has determined the necessary competencies for personnel performing work affecting product quality, provided appropriate training, and made personnel aware of the relevance and importance of their activities on product quality and achievement of the quality objectives. Ensure records of training and competencies are maintained.

Clause and Regulation: [ISO 13485:2016: 4.2.1, 6.2; RDC ANVISA 16/2013: 2.2.3, 2.2.4, 2.3; MHLW MO169: 6, 22, 23, 25.4; 21 CFR 820.20(b)(2), 820.25]

Additional country-specific requirements:

Brazil (ANVISA):

Confirm that the manufacturer ensures that any consultant who gives advice regarding design, purchasing, manufacturing, packaging, labeling, storage, installation, or servicing of medical devices has proper qualification to perform such tasks. Those consultants shall be contracted as a formal service supplier, according to purchasing controls defined by the manufacturer [RDC ANVISA 16/2013: 2.3.3].

Link: Production and Service Controls
During audit of the Production and Service Controls process, ensure that employees who are involved in key operations that affect product realization and product quality have been trained in their specific job tasks, as well as the quality policy and objectives. When appropriate, review the training records for those employees whose activities have contributed to process nonconformities.

7. ***Verify that management has committed to and has responsibility for overall risk management planning, including ongoing review of the effectiveness of risk management activities ensuring that policies, procedures and practices are established and documented for analyzing, evaluating and controlling product risk throughout product realization.***

Clause and Regulation: [ISO 13485:2016: 4.1.2 (b), 7.1; TG(MD)R Sch1 P1 2; RDC ANVISA 16/2013: 2.4; MHLW MO169: 26; 21 CFR 820.30(g)]

Additional country-specific requirements: None

Link: Design and Development
Risk management usually starts in conjunction with the design and development planning process at a point in the development when the results of risk analysis can affect the design process. During audit of the Design and Development process, evaluate top management's commitment to risk management activities. Evidence of commitment to risk management may include the implementation of new or more stringent controls, external controls (e.g. additional supplier-related controls), or design changes to maintain an acceptable level of product risk.

8. Verify that procedures have been defined, documented, and implemented for the control of documents and records of both internal and external origin required by the quality management system. Confirm the organization retains records and at least one obsolete copy of controlled documents for a period of time at least equivalent to the lifetime of the device, but not less than two years from the date of product release.

Clause and Regulation: [ISO 13485:2016: 4.1.4, 4.2.1, 4.2.4, 4.2.5; TG(MD)R Sch3 P1 1.4(4); RDC ANVISA 16/2013: 3.1; MHLW MO169: 5, 6, 8, 9; 21 CFR 820.40, 820.180]

Additional country-specific requirements:

Australia (TGA):

Confirm that Quality Management System documentation and records in relation to a device described in TG(MD)R Sch3 P1 1.9 are retained by the manufacturer for at least 5 years.

Brazil (ANVISA):

Verify that change records include a description of the change, identification of the affected documents, the signature of the approving individual(s), the approval date, and when the change becomes effective [RDC ANVISA 16/2013: 3.1.5].

Confirm that the manufacturer maintains a master list of the approved and effective documents [RDC ANVISA 16/2013: 3.1.5].

Verify that electronic records and documents have backups [RDC ANVISA 16/2013: 3.1.6].

Japan (MHLW)

Confirm that Quality Management System documentation and records in relation to a device are retained by the Registered Manufacturing Site for the following periods (5 years for training records and documentation) [MHLW Ministerial Ordinance No.169: 8.4, 9.3, 67, 68]:
(1) 15 years for 'specially designated maintenance control required medical devices' [or one year plus the shelf life for products when the shelf life or the expiry date (hereinafter simply referred to as the "shelf life") plus one year exceeds 15 years]
(2) 5 years for the products other than the 'specially designated maintenance control required medical devices' (or one year plus the shelf life for the products of which the shelf life plus one year exceeds 5 years).

Note: The 'specially designated maintenance control required medical device' is defined as below in PMD Act 2.8:

A medical device designated by the Minister of Health, Labour and Welfare after hearing the opinion of the Pharmaceutical Affairs and Food Sanitation Council as those whose potential risk to the diagnosis, treatment or prevention of disease is significant without proper control since this kind of equipment requires expert knowledge and skill in examination for maintenance and inspection, repair and other management.

United States (FDA)

Verify that electronic records and documents have backups [21 CFR 820.180].

9. Verify that management review procedures have been documented, management reviews are being conducted at planned intervals and that they include a review of the suitability and effectiveness of the quality policy, quality objectives, and quality management system to assure that the quality management system meets all applicable regulatory requirements.

Clause and Regulation: [ISO 13485:2016: 5.6; TG(MD)R Sch3 P1 1.4(5)(b)(iii)(f); RDC ANVISA 16/2013: 2.2.6; MHLW MO169: 18, 19, 20; 21 CFR 820.20(c)]

Additional country-specific requirements: None

Link: Measurement, Analysis and Improvement
During audit of the Measurement, Analysis and Improvement process, confirm when necessary that action items resulting from Management review are considered for corrective or preventive action.

10. Confirm that the organization has defined and implemented controls to ensure that only devices that have received the appropriate marketing authorization are distributed or otherwise offered for commercial distribution into the applicable markets.

Clause and Regulation: [ISO 13485:2016: 4.1.1, 4.2.1, 5.2, 7.2.1, 7.2.3]

Additional country-specific requirements: None

Link: Device Marketing Authorization and Facility Registration

11. At the conclusion of the audit, a decision should be made as to whether top management has demonstrated the necessary commitment to ensure a suitable and effective quality management system is in place and being maintained and whether the effectiveness of the system has been communicated to personnel.

Clause and Regulation: [ISO 13485:2016: 4.1.1, 4.1.4, 5.1, 5.5.3; RDC ANVISA 16/2013: 2,1, 2.2.1; MHLW MO169: 5, 10, 17; 21 CFR 820.20(a), 820.5]

Medical Device Single Audit Program

Chapter 2

Process: Device Marketing Authorization and Facility Registration

The Device Marketing Authorization and Facility Registration process may be audited as a linkage from the Management process and/or the Design and Development process.

Purpose: The purpose of auditing the Device Marketing Authorization and Facility Registration process is to verify that the organization has performed the appropriate activities regarding device marketing authorization and facility registration with regulatory authorities participating in the MDSAP.

Outcomes: As a result of the audit of the Device Marketing Authorization and Facility Registration process, objective evidence will show whether the organization has:

A) Complied with requirements to register and/or license device facilities

B) Submitted device listing information to regulatory authorities when applicable

C) Obtained device marketing authorization in the appropriate jurisdictions

D) Arranged for assessment of changes (where applicable) and obtained marketing authorization for changes to devices or the quality management system which require amendment to existing marketing authorization

Links to Other Processes: Management, Design and Development

Audit Tasks and Links to Other Processes:

1. **Verify the organization has complied with regulatory requirements to register and/or license device facilities and submit device listing information in the appropriate jurisdictions where the organization markets or distributes devices.**

   Note: In some jurisdictions Device Market Authorization is the responsibility of the Importer / Marketing Authorization Holder / Sponsor. Market Authorization however may only be appropriate if the manufacturer and importer fulfil obligations that have been placed upon them by the relevant legislation, including obligations to each other (e.g. communications concerning feedback, adverse event reporting and the management of advisory notices and recalls) Prior to an audit, an Auditing Organization shall independently investigate the identity and range of products, facilities and importers (e.g. Importer, MAH, Sponsor, etc.) that are known to the Regulatory Authority of each jurisdiction where the manufacturer / organization intends to supply product. Verify at, or prior to, audit that the regulatory requirements to register and/or license device facilities and submit device listing information have been appropriately applied for each manufacturer / importer arrangement. Note that some importers / MAHs / Sponsors may have provided information to Regulatory Authorities indicating that a manufacturer is the "legal manufacturer" even though the manufacturer inappropriately considers themselves to be an Original Equipment Manufacturer or an Original Device Manufacturer. A review of labelling for product being supplied to a particular jurisdiction may assist with determining if appropriate market authorization processes have been applied.

Clause and regulation: [ISO 13485:2016: 4.1.1, 4.2.1, 5.2, 7.2.1, 7.2.3; see the country-specific requirements below]

Country specific requirements:

Australia (TGA):

Therapeutic Goods Act 1989 – Chapter 4
Therapeutic Goods (Medical Devices) Regulations 2002

Brazil (ANVISA):

Brazilian Federal Law 6360/76

Canada (HC):

SOR/98-282 Medical Devices Regulations – Part 1

Japan (MHLW)
The Act on Securing Quality, Efficacy and Safety of Pharmaceuticals, Medical Devices, Regenerative and Cellular Therapy Products, Gene Therapy Products, and Cosmetics (Law No. 145, 1960):Chapter 5.1

United States (FDA):

21 CFR 807: Establishment Registration and Device Listing for Manufacturers and Initial Importers of Medical Devices

Link: Management

During audit of the Management process, confirm that management is aware of and has made arrangements for device marketing authorization and facility registration.

2. Confirm the organization has received appropriate device marketing authorization in the regulatory jurisdictions where the organization markets its devices.

Clause and regulation: [ISO 13485:2016: 4.1.1, 4.2.1, 5.2, 7.2.1, 7.2.3; see the country-specific requirements below]

Country specific requirements:

Australia (TGA):

Obtaining marketing authorization is the responsibility of the Australian sponsor (refer to *Therapeutic Goods Act 1989* – Part 4-5). Verify that the manufacturer maintains a list of their Australian Sponsors and the products those Sponsors have included in the Australian Register of Therapeutic Goods.

Brazil (ANVISA):

Obtaining marketing authorization is the responsibility of the importer (legal representative). Refer to Brazilian Federal Law 6360/76

Canada (HC):

SOR/98-282 Medical Devices Regulations – Part 1, section 26

Japan (MHLW)

The Act on Securing Quality, Efficacy and Safety of Pharmaceuticals, Medical Devices, Regenerative and Cellular Therapy Products, Gene Therapy Products, and Cosmetics (Law No. 145, 1960): 23-2.1,23-2-5.1, 23-2-23.1, 23-2-12

United States (FDA):

21 CFR 807.81: Premarket notification submission
21 CFR 814: Premarket approval of Medical Devices

Link: Management, Design and Development
During the audit of the Management and Design and Development processes, ensure that management is aware of requirements for device marketing authorization and facility registration, and that these are considered when designing the device. Confirm that management obtains marketing authorization in the appropriate jurisdictions prior to commercial distribution of the device.

3. Verify the organization has arranged for assessment of the change (where applicable) and obtained marketing authorization for changes to devices or the quality management system which require amendment to existing marketing authorization.

Clause and regulation: [ISO 13485:2016: 4.1.1, 4.2.1, 5.2, 7.2.1, 7.2.3, 7.3.9; see the country-specific requirements below]

Country specific requirements:

Australia (TGA):

Arranging assessment of changes is the responsibility of the organization. Obtaining marketing authorization for changes is the responsibility of the Australian Sponsor. Refer to Therapeutic Goods (Medical Devices) Regulations 2002, Regulation 3.5 – Medical devices manufactured outside Australia, Schedule 3 - The relevant conformity assessment procedure chosen by the manufacturer.

Brazil (ANVISA):

Arranging assessment of changes is the responsibility of the organization. Obtaining marketing authorization for changes is the responsibility of the importer (legal representative). Refer to Brazilian Law 6360/76 - Art. 13.

Canada (HC):

SOR/98-282 Medical Devices Regulations – Part 1, sections 1, 34, 43(1), 43(3), and 43.1

Japan (MHLW)

The Act on Securing Quality, Efficacy and Safety of Pharmaceuticals, Medical Devices, Regenerative and Cellular Therapy Products, Gene Therapy Products, and Cosmetics (Law No. 145, 1960): 23-2-5.1, 23-2-5.11, 23-2-5.17, 23-2-23.1, 23-2-23.6, 23-2-23.7
MHLW MO169: 29

United States (FDA):

21 CFR 807.81
21 CFR 814.39

Link: Design and Development
During the audit of the Design and Development process, the audit team should confirm the organization has considered regulatory requirements for device marketing authorization and facility registration; and has complied with these requirements prior to marketing the changed device in the applicable regulatory jurisdictions.

Medical Device Single Audit Program

Chapter 3

Process: Measurement, Analysis and Improvement

The Measurement, Analysis and Improvement process is the second primary process to be audited per the MDSAP audit sequence. When applicable, information regarding device or identified quality management system nonconformities observed during the audit of the Measurement, Analysis and Improvement process should be used to make decisions as to design projects or design changes to assess during audit of the Design and Development process, suppliers to evaluate during audit of the Purchasing process, and processes to review during audit of the Production and Service Controls process.

Auditing the Measurement, Analysis and Improvement Process

Purpose: The purpose of auditing the Measurement, Analysis and Improvement process is to verify that the manufacturer's processes ensure that information related to products, processes, or the quality management system is collected and analyzed to identify actual and potential product, process, or quality system nonconformities, that problems and potential problems are investigated, and that appropriate and effective corrective actions and preventive actions are taken.

Outcomes: As a result of the audit of the Measurement, Analysis and Improvement process, objective evidence will show whether the organization has:

A) Defined, documented, and implemented procedures for measurement, analysis and improvement that address the requirements of the quality management system standard and participating MDSAP regulatory authorities

B) Identified, analyzed, and monitored appropriate sources of quality data to identify nonconformities or potential nonconformities and determined the need for corrective or preventive action

C) Ensured investigations are conducted to identify the underlying cause(s) of nonconformities and potential nonconformities, where possible

D) Implemented appropriate corrective action to eliminate the recurrence or preventive action to prevent the occurrence of product or quality system nonconformities, commensurate with the risks associated with the nonconformities or potential nonconformities encountered

E) Reviewed the effectiveness of corrective action and preventive action

F) Utilized information from the analysis of production and post-production quality data to amend the analysis of product risk, as appropriate

Links to Other Processes: Design and Development; Production and Service Controls; Purchasing; Medical Device Adverse Events and Advisory Notices Reporting; Management

Audit Tasks and Links to Other Processes:

1. **Verify that procedures for measurement, analysis and improvement which address the requirements of the quality management system standard and regulatory authorities have been established and documented. Confirm the organization maintains and implements procedures to monitor and measure product conformity throughout product realization, as well as procedures that provide for mechanisms for feedback to provide early warnings of quality problems and the implementation of corrective action and preventive action.**

   Clause and regulation: [ISO 13485:2016: 4.2.1, 8.1, 8.2.1, 8.2.6, 8.5; TG(MD)R Sch3 P1 1.4(3)(a),(b), (5)(b)(iii), (f); RDC ANVISA 16/2013: 5.3.1, 7.1, 7.2; MHLW MO169: 6, 54, 55, 58, 62, 63, 64; 21 CFR 820.100(a)]

   Additional country-specific requirements:

   Brazil (ANVISA):

   Verify that the manufacturer has ensured that information about quality problems or nonconforming products are properly disseminated to those directly involved in the maintenance of product quality and to prevent occurrence of such problems [RDC ANVISA 16/2013: 7.1.1.6].

   United States (FDA):

   Verify procedures ensure that information related to quality problems or nonconforming product is disseminated to those directly responsible for assuring the quality of such product or the prevention of problems [21 CFR 820.100(a)(6)].

   Confirm procedures provide for the submission of relevant information on identified quality problems, as well as corrective and preventive actions, for management review [21 CFR 820.100(a)(7)].

2. **Determine if appropriate sources of quality data have been identified for input into the measurement, analysis and improvement process, including customer complaints, feedback, service records, returned product, internal and external audit findings, nonconformities from regulatory audits and inspections, and data from the monitoring of products, processes, nonconforming products, and suppliers. Confirm that data from these sources are accurate and analyzed according to a documented procedure for the use of valid statistical methods (where appropriate) to identify existing and potential product and quality management system nonconformities that may require corrective or preventive action.**

   Clause and regulation: [ISO 13485:2016: 7.5.4, 8.1, 8.2.1, 8.2.6, 8.4; TG(MD)R Sch3 P1 1.4(3)(a),(b), (5)(b)(iii), (f); RDC ANVISA 16/2013:7.1.1.1, 9.1; MHLW MO169: 43, 54, 55, 58, 61; 21 CFR 820.100(a)]

   Additional country-specific requirements: None

Link: Purchasing
During the audit of the Measurement, Analysis and Improvement process, the audit team may encounter data involving product nonconformities, including complaints involving finished devices, where the underlying cause of the quality problem has been traced to a supplied product. During the audit of the Purchasing process, the audit team should consider selecting suppliers to audit that have corrective action indicators of nonconformities with supplied components or processes.

3. **Determine if investigations are conducted to identify the underlying cause(s) of detected nonconformities, where possible.** *Confirm investigations are commensurate with the risk of the nonconformity.*

   Clause and regulation: [ISO 13485:2016: 8.5.2; TG(MD)R Sch3 P1 1.4(3)(a),(b), (5)(b)(iii),(f), TG(MD)R Sch1 P1 2; RDC ANVISA 16/2013: 2.4, 6.5.1, 7.1.1.2; MHLW MO169: 63; 21 CFR 820.100 (a)(2)]

   Additional country-specific requirements: None

4. **Determine if investigations are conducted to identify the underlying cause(s) of potential nonconformities, where possible.** *Confirm investigations are commensurate with the risk of the potential nonconformity.*

   Clause and regulation: [ISO 13485:2016: 8.5.3; TG(MD)R Sch3 P1 1.4(3)(a),(b), (5)(b)(iii),(f), TG(MD)R Sch1 P1 2; RDC ANVISA 16/2013: 2.4, 7.1.1.1; MHLW MO169: 64; 21 CFR 820.100(a)(2)]

   Additional country-specific requirements: None

5. **Confirm that corrections, corrective actions, and preventive actions were determined, implemented, documented, effective, and did not adversely affect finished devices. Ensure corrective action and preventive action is appropriate to the risk of the non-conformities or potential nonconformities encountered.**

   Clause and regulation: [ISO 13485:2016: 8.2.1, 8.2.5, 8.3.1, 8.5.2, 8.5.3; TG(MD)R Sch1 P1 2, TG(MD)R Sch3 P1 1.4(3)(a),(b), (5)(b)(iii), (f);; RDC ANVISA 16/2013: 2.4, 6.5, 7.1.1.3, 7.1.1.4, 7.1.1.5; MHLW MO169: 55, 57, 60, 63, 64; 21 CFR 820.100(a)(3), 820.100 (a)(4), 820.100(a)(6), 820.100(b)]

   Additional country-specific requirements: None

Link: Medical Device Adverse Events and Advisory Notices Reporting
Determine whether any of the organization's corrective actions require reporting to participating MD-SAP authorities.

6. *When a corrective or preventive action results in a design change, verify that any new hazard(s) and any new risks are evaluated under the risk management process.*

   Clause and regulation: [ISO 13485:2016: 7.1, 7.3.9; TG(MD)R Sch1 P1 2; RDC ANVISA 16/2013: 2.4, 4.1.10; MHLW MO169: 26, 36;21 CFR 820.30(i), 820.30(g)]

   Additional country-specific requirements: None

Link: Design and Development
If the corrective action or preventive action involves changing the design, design controls should be applied to the change where applicable. When necessary, confirm that design controls were applied to the change according to the organization's procedures. In addition, design changes should be evaluated under the organization's risk management process to ensure that changes do not introduce new hazards.

7. *When a corrective or preventive action results in a process change, confirm that the process change is assessed to determine if any new risks to the product are introduced.* **Verify the manufacturer has performed revalidation of processes where appropriate.**

   Clause and regulation: [ISO 13485:2016: 4.1.2, 4.1.4, 4.1.6, 4.2.1, 7.1, 7.5.6, 7.5.7; TG(MD)R Sch1 P1 2; Sch3 P1 1.5(4); RDC ANVISA 16/2013: 2.4, 5.6, 7.1.1.4; MHLW MO169: 5, 6, 26, 45, 46; 21 CFR 820.100(a)(4), 820.100(a)(5), 820.70(b), 820.75(c)]

Additional country-specific requirements:

Australia (TGA):

Confirm that when a manufacturer plans to make a substantial change to a critical process (e.g. sterilization, processing materials of animal origin, processing materials of microbial or recombinant origin, or processes that incorporate a medicinal substance in a medical device), the manufacturer notifies the auditing organization who will determine if an assessment of the change is required before implementation [TG(MD)R Sch3 P1 1.5(2)].

Canada (HC):

Verify that the manufacturer has a process or procedure for identifying a "significant change" to a class III or IV device. Verify that information about "significant changes" is submitted in a medical device license amendment application [CMDR 1, 34].

Japan (MHLW):

Confirm that when the Registered Manufacturing Site plans to make a significant change to a manufacturing processes (e.g. sterilization site change, manufacturing site change), the Registered Manufacturing Site notifies the Marketing Authorization Holder so as the Marketing Authorization Holder can take appropriate regulatory actions.
[MHLW MO169: 29]

Links: Production and Service Controls, Purchasing

If the corrective action or preventive action involves changing a production process, the audit team should consider selecting this change for evaluation during audit of Production and Service Controls.

For changes to production processes that are performed by suppliers, the audit team should consider selecting those suppliers for evaluation during audit of the Purchasing process. In cases where the organization makes a change to a validated process performed by a supplier, the audit team should evaluate whether re-validation is required. If re-validation of production processes is required, confirm the results show the process meets the planned result.

8. Verify that controls are in place to ensure that product which does not conform to product requirements is identified and controlled to prevent its unintended use or delivery. Confirm that an appropriate disposition was made, justified, and documented, that any external party responsible for the nonconformity was notified.

Clause and regulation: [ISO 13485:2016: 8.3.1, 8.3.2; TG(MD)R Sch3 P1 1.4(5)(b)(iii); RDC ANVISA 16/2013: 6.5, 7.1.1.6; MHLW MO169: 60 ;21 CFR 820.90(a)]

Additional country-specific requirements: None

9. Confirm that when nonconforming product is detected after delivery or use, appropriate action is taken *commensurate with the risk, or potential risks, of the nonconformity.*

Clause and regulation: [ISO 13485:2016: 8.3.3, 8.5.2; TG(MD)R Sch1 P1 2, TG(MD)R Sch3 P1 1.4(3)(a),(b), (5)(b)(iii), (f); RDC ANVISA 16/2013: 2.4, 7.1.1.8; MHLW MO169: 60, 63; 21 CFR 820.100(a)]

Additional country-specific requirements: None

Link: Medical Device Adverse Events and Advisory Notices Reporting
If the organization has taken field action on products already distributed, confirm that the appropriate MDSAP regulatory authorities have been notified, as necessary.

10. Verify that internal audits of the quality management system are being conducted according to planned arrangements and documented procedures to ensure the quality management system is in compliance with the established quality management system requirements and applicable regulatory requirements, and to determine the effectiveness of the quality system. Confirm that the internal audits include provisions for auditor training and independence over the areas being audited, corrections, corrective actions, follow-up activities, and the verification of corrective actions.

Clause and Regulation: [ISO 13485:2016: 6.2, 8.2.4; TG(MD)R Sch3 P1 1.4(5)(b)(iii); RDC ANVISA 16/2013: 7.3; MHLW MO169: 22, 23 56; 21 CFR 820.22, 820.100]

Additional country-specific requirements: None

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Link: Management
During the audit of the Management process, the audit team should confirm that the output of internal audits is an input to management review.

11. Determine if relevant information regarding nonconforming product, quality management system nonconformities, corrections, corrective actions, and preventive actions has been supplied to management for management review.

Clause and regulation: [ISO 13485:2016: 5.6.2; TG(MD)R Sch3 P1 1.4(5)(b)(iii); RDC ANVISA 16/2013: 2.2.6, 7.1.1.7; MHLW MO169:19; 21 CFR 820.100 (a)(7)]

Additional country-specific requirements: None

Link: Management
During your audit of the Management process, the audit team should have confirmed that the status of corrective and preventive actions is an input to the management review. During the audit of the Measurement, Analysis and Improvement process, determine that top management is aware of higher-risk quality problems, as well as significant corrective and preventive actions, when necessary.

12. Confirm that the manufacturer has made effective arrangements for gaining experience from the post-production phase, handling complaints, and investigating the cause of nonconformities related to advisory notices with provision for feedback into the Measurement, Analysis and Improvement process. *Verify that information from the analysis of production and post-production quality data was considered for amending the analysis of product risk, as appropriate.*

Clause and regulation: [ISO 13485:2016: 4.2.1, 7.2.3, 7.5.4 (a), 8.2.1, 8.2.2; TG(MD)R Sch1 P1 2, Sch3 P1 1.4(3), 1.4(5)(b)(iii) &1.4(5)(f); RDC ANVISA 16/2013: 7.2; CMDR 57-58; MHLW MO169: 6, 29, 43, 55, 62.6; 21 CFR 820.198]

Additional country-specific requirements:

Australia (TGA):

Verify that the organization has procedures for a post-marketing system that includes a systematic review of post-production experience (e.g. from; expert user groups, customer surveys, customer complaints and warranty claims, service and repair information, literature reviews, post-production clinical trials, user feedback other than complaints, device tracking and registration schemes, user reactions during training, adverse event reports). Investigation should take place in a timely manner to ensure that reporting timeframes for adverse events or the implementation of advisory notices (recalls) may be met by the Australian Sponsor [TG(MD)R Sch3 P1 1.4(3)(a)].

Note: In Australia the conduct of a recall is the responsibility of the Australian Sponsor in accordance with the Australian Uniform Recall Procedure for Therapeutic Goods.

Brazil (ANVISA):

Verify that each manufacturer has established and maintains procedures to receive, examine, evaluate, investigate and document complaints. Such procedures must ensure that:

(1) Complaints are received, documented, analyzed, evaluated, investigated and documented by a formally designated unit;

(2) Where applicable, complaints must be reported to the competent health authority;

(3) Complaints must be examined to determine whether an investigation is necessary. When an investigation is not done, the unit must maintain a record that includes the reason that the investigation was not performed and the name of the responsible for that decision;

(4) Each manufacturer must examine, evaluate and investigate all complaints involving possible nonconformities of the product. Any claim for death, injury or threat to public health must be immediately reviewed, evaluated and investigated.

(5) The records of the investigation must include:

Product name;
Date of receipt of the complaint;
Any control number used;
Name, address and telephone number of the complainant;
Nature of complaint; and
Data and research results including actions taken [RDC ANVISA 16/2013: 7.2].

Canada (HC):

Verify that the manufacturer maintains records of reported problems related to the performance characteristics or safety of a device, including any consumer complaints received by the manufacturer after the device was first sold in Canada, and all actions taken by the manufacturer in response to the problems referred to in the complaints [CMDR Section 57].

Verify that the manufacturer has established and implemented documented procedures that will enable it to carry out an effective and timely investigation of the problems reports through the customer complaints, and to carry out an effective and timely recall of the device [CMDR Section 58].

Japan (MHLW/PMDA)

Confirm that the person operating the Registered Manufacturing Site has determined and implemented effective arrangement for communicating with the Japanese Marketing Authorization Holder in relation to customer feedback, including customer complaints, and advisory notices [MHLW MO169: 29].

United States (FDA):

Verify procedures have been defined, documented, and implemented for receiving, reviewing, and evaluating complaints by a formally designated unit. Procedures must ensure that:

(1) All complaints are processed in a uniform and timely manner

(2) Oral complaints are documented upon receipt

(3) Complaints are evaluated to determine whether the complaint represents an event which is required to be reported to FDA

Each manufacturer must review and evaluate all complaints to determine whether an investigation is necessary. When no investigation is made, the manufacturer must maintain a record that includes the reason no investigation was made and the name of the individual responsible for the decision not to investigate.

Any complaint of the failure of the device, labeling, or packaging to meet any of its specifications must be reviewed, evaluated, and investigated, unless such investigation has already been made for a similar complaint and another investigation is not necessary.

Any complaint that represents an event which must be reported to FDA must be promptly reviewed, evaluated, and investigated by a designated individual(s) and must be maintained in a separate portion of the complaint files or otherwise clearly identified. Records of investigation must include a determination of:

(1) Whether the device failed to meet specifications

(2) Whether the device was being used for treatment or diagnosis

(3) The relationship, if any, of the device to the reported incident or adverse event

When an investigation is made, a record of the investigation must be maintained by the formally designated unit. The record of investigation must include:

(1) The name of the device

(2) The date the complaint was received

(3) Any unique identifier (UDI), or Universal Product Code (UPC) or any other device identification(s) and control number(s) used

(4) The name, address, and telephone number of the complainant

(5) The nature and details of the complaint

(6) The dates and results of investigation

(7) Any corrective action taken

When the manufacturer's formally designated unit is located at a site separate from the manufacturing establishment, the investigated complaint(s) and the record(s) of investigation must be reasonably accessible to the manufacturing establishment [21 CFR 820.198].

Link: Medical Device Adverse Events and Advisory Notices Reporting
During the review of complaints and feedback, confirm that individual medical device reports were made to the appropriate regulatory authorities when necessary.

13. Where investigation determines that activities outside the organization contributed to a customer complaint, verify that records show that relevant information was exchanged between the organizations involved.

Clause and regulation: [ISO 13485:2016: 4.1.5, 7.4.1, 8.3.1; RDC ANVISA 16/2013: 7.1.1.6; MHLW MO169: 5, 37, 60; 21 CFR 820.100(a)(6)]

Additional country-specific requirements: None

Link: Purchasing
During the audit of the Measurement, Analysis and Improvement process, if significant nonconformities are related to supplied product, the audit team should consider selecting those suppliers for evaluation during the audit of the organization's Purchasing process.

14. Verify that the organization has defined and documented procedures for the notification of adverse events. Confirm adverse event reporting is performed according to the applicable regulatory requirements.

Clause and regulation: [ISO 13485:2016: 4.2.1, 7.2.3, 8.2.3; TG(MD)R Sch3 P1 1.4(3)(c); RDC ANVISA 16/2013: 7.1.1.8, RDC ANVISA 67/2009; CMDR 59-61.1; MHLW MO169: 6, 29, 62; 21 CFR 803]

Additional country-specific requirements: Refer to MDSAP process Medical Device Adverse Events and Advisory Notices Reporting

15. Confirm that the manufacturer has made effective arrangements for the timely issuance and implementation of advisory notices. Confirm that reporting of advisory notices is established in a documented procedure and performed according to the applicable regulatory requirements.

Clause and regulation: [ISO 13485:2016: 4.2.1, 7.2.3, 8.3.3; TG(MD)R Sch3 P1 1.4(3)(c); RDC ANVISA 16/2013: 7.1.1.8, RDC ANVISA 23/2012; CMDR 63-65.1; MHLW MO169: 6, 29, 60; 21 CFR 806]

Additional country-specific requirements: Refer to MDSAP process Medical Device Adverse Events and Advisory Notices Reporting

16. Determine, based on the assessment of the Measurement, Analysis and Improvement process overall, whether management provides the necessary commitment to detect and address product and quality management system nonconformities, and ensure the continued suitability and effectiveness of the quality management system.

Clause and regulation: [ISO 13485:2016: 4.1.3, 5.2, 8.1, 8.5.1; RDC ANVISA 16/2013: 2.2.1; MHLW MO169: 5, 11, 54, 62]

Medical Device Single Audit Program

Chapter 4

Process: Medical Device Adverse Events and Advisory Notices Reporting

The Medical Device Adverse Events and Advisory Notices Reporting process may be audited as a linkage from the Measurement, Analysis and Improvement process.

Purpose: The purpose of auditing the Medical Device Adverse Events and Advisory Notices Reporting process is to verify that the organization's processes ensure that individual device-related adverse events and advisory notices involving medical devices are reported to regulatory authorities within required timeframes.

Outcomes: As a result of the audit of the Medical Device Adverse Events and Advisory Notices Reporting process, objective evidence will show whether the organization has:

A) Defined processes to ensure individual device-related adverse events are reported to regulatory authorities as required

B) Ensured that advisory notices are reported to regulatory authorities and authorized representatives when necessary

C) Maintained appropriate records of individual device-related adverse events and advisory notices

Links to Other Processes: Measurement, Analysis and Improvement

Audit Tasks and Links to Other Processes:

1. **Verify that the organization has a process in place for identifying device-related events that may meet reporting criteria as defined by participating regulatory authorities. Verify that the complaint process has a mechanism for reviewing each complaint to determine if a report to a regulatory authority is required. Confirm that the organization's processes meet the timeframes required by each regulatory authority where the product is marketed.**

   Clause and regulation: [ISO 13485:2016: 4.2.1, 7.2.3, 8.2.2, 8.2.3; see the country-specific requirements below]

   Country-specific requirements: Australia (TGA):

   For Manufacturers: TG(MD)R Sch3 Cl1.4(3)(c)(i)
   For Sponsors: Manufacturers and Australian Sponsors are to establish through a written agreement, the arrangements that are necessary to ensure that Sponsors are able to comply with reporting requirements and timeframes. *Therapeutic Goods Act 1989*, 41FN(3) & (4), TG(MD)R, 5.7, 5.8

   Brazil (ANVISA):

   RDC ANVISA 67/2009
   RDC ANVISA 16/2013: 7.1.1.7

   Canada (HC):

   Medical Device Regulations SOR/98-282, CMDR 1, 59-61.1

   Japan (MHLW):

   MHLW MO169:62.6

United States

(FDA): 21 CFR 803: Medical Device Reporting

Link: Measurement, Analysis and Improvement
Reports of individual adverse events are a form of feedback and must be analyzed as appropriate for trends requiring improvement or corrective action. During the audit of the Measurement, Analysis and Improvement process, confirm that the organization has considered individual adverse events and trends of adverse events in the analysis of data.

2. Verify that advisory notices are reported to regulatory authorities when necessary and comply with the timeframes and recordkeeping requirements established by participating regulatory authorities.

Clause and regulation: [ISO 13485:2016: 4.2.1, 7.2.3, 8.2.3, 8.3.3; see the country-specific requirements below]

Country specific requirements: Australia (TGA):

For Manufacturers: TG(MD)R Sch3 Cl1.4(3)(c)(ii)
For Sponsors: Manufacturers and Australian Sponsors are to establish through written agreement the arrangements that are necessary to ensure that Sponsors are able to comply with recall requirements and timeframes. *Therapeutic Goods Act 1989*, 41FN(3) & (4), and the requirements imposed in writing that are referenced in the TG Act 41KA and documented in the "TGA Uniform recall procedure for therapeutic goods (URPTG)"

Brazil (ANVISA):

RDC ANVISA 67/2009
RDC ANVISA 23/2012
RDC ANVISA 16/2013: 7.1.1.8

Canada (HC):

CMDR 1, 63 – 65.1

Japan (MHLW):

The Act on Securing Quality, Efficacy and Safety of Pharmaceuticals, Medical Devices, Regenerative and Cellular Therapy Products, Gene Therapy Products, and Cosmetics (Law No. 145, 1960): 68-11
MHLW MO169: 29

United States (FDA):

21 CFR 806 – Medical Devices; Reports of Corrections and Removals

Link: Measurement, Analysis and Improvement
Corrections and removals are indicative that the product or process does not meet specified requirements or planned results and the nonconformity was not detected prior to distribution. When specified requirements or planned results are not achieved, correction and corrective action must be taken as necessary. During the audit of the Measurement, Analysis and Improvement process, confirm the organization has taken appropriate correction regarding devices already distributed, and taken appropriate corrective action to prevent recurrence of the condition(s) that caused the nonconformity.

Medical Device Single Audit Program

Chapter 5

Process: Design and Development

Audit of the Design and Development process will follow audit of the Measurement, Analysis and Improvement process per the MDSAP audit sequence. Information regarding product or quality management system nonconformities noted during audit of the Measurement, Analysis and Improvement process should be considered when making decisions as to the design and development projects, including design changes resulting from corrective actions, to be reviewed during the audit of the Design and Development process. Review of the Design and Development process will also provide an opportunity to evaluate how the organization has utilized risk management activities to ensure design inputs are comprehensive and meet user needs, to confirm that risk control measures that were planned have been implemented in the design, and to verify that risk control measures are effective in controlling or reducing risk. Additionally, review of design and development activities will assist the audit team during the audit of the organization's Purchasing process because the auditor(s) may choose to select suppliers for review whose activities are associated with higher risk to the product or whose activities are critical to the essential design outputs. The review of design and development activities also provides information to assist the audit team in performing a final evaluation of the Management process at the conclusion of the audit.

Auditing the Design and Development Process

Purpose: The purpose of auditing the Design and Development process is to verify that the organization establishes, documents, implements, and maintains controls to ensure that medical devices meet user needs, intended uses, and specified requirements.

Outcomes: As a result of the audit of the Design and Development process, objective evidence will show whether the organization has:

A) Defined, documented and implemented procedures to ensure medical devices are designed according to specified requirements

B) Effectively planned the design and development of a device

C) Established mechanisms, including systematic review, for addressing incomplete, ambiguous or conflicting requirements

D) Determined the internally or externally imposed requirements for safety, function, and performance for the intended use, including regulatory requirements, risk management, and human factors requirements

E) Verified that design outputs satisfy design input requirements

F) Identified and mitigated, to the extent practical, the risks associated with the device, including the device software

G) Ensured that changes to the device design are controlled, the risks associated with the design change are identified and mitigated, to the extent practical, and that the device will continue to perform as intended

H) Performed design validation to ensure devices conform to user needs and intended use

l) Confirmed that the design is correctly translated into production methods and procedures

Links to Other Processes: Purchasing; Production and Service Controls; Measurement, Analysis and Improvement; Device Marketing Authorization and Facility Registration

Audit Tasks and Links to Other Processes:

1. **Verify that those devices that are, by regulation, subject to design and development procedures have been identified. (See Annex 1).**

Clause and regulation: [ISO 13485:2016: 4.1.1, 4.2.1, 7.1, 7.3.10; TG(MD)R Regs Division 3.2; MHLW MO169: 5, 6, 26; 21 CFR 820.30(a)]

Additional country-specific requirements: Australia (TGA):

When a manufacturer applies TG(MD)R Regs Division 3.2 and selects the Full Quality Assurance conformity assessment procedures [TG(MR)R Schedule 3, Part1], procedures for design and development must be available.

In addition, for all classes of devices, the guidance provided for the audit of technical documentation in Annex 1 is to be followed to ensure the availability of objective evidence that demonstrates compliance with the Essential Principles of Safety and Performance.

Brazil (ANVISA):

According to Brazilian legislations, there is no exception to design control.

If design activities are outsourced, verify that the manufacturer has a complete device master record for the device and records of the design transfer to production [RDC ANVISA 16/2013: 4.1.7, 4.2].

Canada (HC):

With respect to Class II devices that are not subject to Design and Development controls, verify that the manufacturer has objective evidence to establish that Class II devices meet the safety and effectiveness requirements of section 10 to 20 [CMDR 9, 10 to 20].

Japan (MHLW):

Class 1 devices are not required to comply with the requirements of MHLW MO169:30-36, which are equivalent to the requirement of design and development in ISO13485 [MHLW MO169:4.1].

Link: Purchasing
If the organization outsources design and development activities, or any portion of the design and development, confirm that the organization treats the outsourced organization as a supplier, has appropriately qualified and maintains control over the supplier, communicates requirements to the supplier, including regulatory requirements, and has arrangements to verify that the design and development activities satisfy those requirements.

2. **Select a completed (where applicable) design and development project for review. Priority criteria for selection:**
   - **complaints or known problems with a particular device**
   - ***product risk***
   - **recent design changes, particularly design changes made to correct quality**

problems associated with the device design

- **age of design (prefer most recent)**
- **designs that have not been recently audited**

Link: Measurement, Analysis and Improvement

At this point in the audit, the audit team will have already reviewed the Measurement, Analysis and Improvement process. If the auditors noted corrective actions that resulted in design changes, or noted product nonconformities that have been attributed to the design of the device, the audit team should consider selecting those designs for review. The audit team should be particularly mindful of how the identified quality problems from the Measurement, Analysis and Improvement process are related to specific aspects of the design and development of the device. For example, if the auditors review complaints related to a safety feature of the device that is not performing as intended, the audit team should consider selecting for review the design verification of that safety feature and determine whether appropriate risk control methods were confirmed to be effective.

3. **Verify that the design and development process is planned and controlled. Review the design plan for the selected design and development project to understand the design and development activities; including the design and development stages, the review, verification, validation, and design transfer activities that are appropriate at each stage; and the assignment of responsibilities, authorities, and interfaces between different groups involved in design and development.**

   Clause and regulation: [ISO 13485:2016: 4.2.1, 7.1, 7.3.2; TG(MD)R Sch3 P1 Cl 1.4(4)&(5)(c); RDC ANVISA 16/2013: 4.1.2, 4.1.11; MHLW MO169: 6, 26, 30; 21 CFR 820.30(b), 820.30(j)]

   Additional country-specific requirements:

   Australia (TGA):

   Verify that effective planning for design and development is documented, typically as part of a Quality Plan [TG(MD)R Sch3 P1 Cl 1.4(4)].

   Canada (HC):

   Verify that manufacturers of Class IV devices maintain a quality plan that sets out the specific quality practices, resources, and sequence of activities relevant to the device [CMDR 32].

4. **For the device design and development record(s) selected, verify that design and development procedures have been established and applied. Confirm the design and development procedures address the design and development stages, review, verification, validation, design transfer, and design changes.**

   Clause and regulation: [ISO 13485:2016: 4.2.1, 7.3.1, 7.3.10; TG(MD)R Sch3 P1 Cl 1.4(4)&(5)(c); RDC ANVISA 16/2013: 4.1.1; MHLW MO169: 6, 30; 21 CFR 820.30(a), 820.30(j)]

   Additional country-specific requirements:

   United States (FDA):

   Verify that the design input procedures contain a mechanism for addressing incomplete, ambiguous, or conflicting requirements [21 CFR 820.30(c)].

5. **Verify that design and development inputs were established, reviewed and approved; and that they address customer functional, performance and safety requirements, intended use, applicable regulatory requirements, and other requirements including those arising from human factors issues, essential for design and development.** ***Verify that any risks and risk mitigation measures identified during the risk management process are used as an input in the design and development process.***

Clause and regulation: [ISO 13485:2016: 4.2.1, 5.2, 7.2.1, 7.3.3; TG(MD)R Sch1 P1 2, Sch3 P1 Cl 1.4(2)&(5)(c); RDC ANVISA 16/2013: 2.4, 4.1.3, 4.1.11; CMDR 10-20, 21-23, 66, 67,68; MHLW MO169: 6, 11, 27, 31; 21 CFR 820.30(c), 820.30(g)]

Additional country-specific requirements:

Australia (TGA):

Verify that the manufacturer has identified the relevant Essential Principles that apply to the medical device TG(MD)R Sch1 Essential Principles].

United States (FDA):

For the selected device(s), verify that the organization has the appropriate marketing clearance [510(k)] or pre-market approval (PMA) if distributing the devices in the United States [21 CFR 807].

Link: Device Marketing Authorization and Facility Registration
Confirm the organization has considered regulatory requirements for registration, listing, notification and licensing; and has complied with these requirements prior to marketing the device in the applicable regulatory jurisdictions.

6. **Confirm that the design and development inputs are complete, unambiguous, and not in conflict with each other.**

Clause and regulation: [ISO 13485:2016: 7.3.3; TG(MD)R Sch 3 Part 1.4(4), RDC ANVISA 16/2013: 4.1.3; MHLW MO169: 31; 21 CFR 820.30(c)]

Additional country-specific requirements: None

7. **Review medical device specifications to confirm that design and development outputs are traceable to and satisfy design input requirements. Verify that the design and development outputs essential for the proper functioning of the medical device have been identified. Outputs include, but are not limited to, device specifications, specifications for the manufacturing process, specifications for the sterilization process (if applicable), the quality assurance testing, and device labeling and packaging.**

Clause and regulation: [ISO 13485:2016: 4.2.1,4.2.3, 7.3.4; TG(MD)R Sch3 P1 Cl 1.4(5)(c); RDC ANVISA 16/2013:4.1.5, 4.1.4, 4.1.11; MHLW MO169: 6, 32; 21 CFR 820.30(d), 820.30(f)]

Additional country-specific requirements: Australia (TGA):

Confirm that documentation identifies whether relevant state of the art standards have been applied in full or in part. If standards have not been applied, ensure that the manufacturer has documented a rationale to explain why alternative methods have been applied to demonstrate compliance with the Essential Principles [TG(MD)R Sch3 Part 1.4(5)(c)(iii)(C)].

For devices incorporating a medicinal substance, verify that documentation also identifies the data to be derived from tests conducted in relation to the substance, and its interaction with the device [TG(MD)R Sch 3

Part 1.4(5)(c)(v)].

Links: Purchasing, Production and Service Controls

During the review of a design project, the audit team should be mindful of production processes and supplied products that are essential to the proper functioning of the device. Production processes can include not only the manufacturing instructions, but also internal controls, such as the type and extent of acceptance activities, equipment calibration and maintenance intervals, environmental controls, and personnel controls. For suppliers that provide products and services related to the essential design outputs, the degree of purchasing controls necessary is commensurate with the effect of the supplied products on the proper functioning of the finished device.

During the audits of the Purchasing process and Production and Service Controls process, the audit team should consider reviewing production processes and supplied products that have the highest risk or greatest effect on the essential design outputs.

8. *Verify that risk management activities are defined and implemented for product and process design and development. Confirm that risk acceptability criteria are established and met throughout the design and development process.* **Verify that any residual risk is evaluated and, where appropriate, communicated to the customer (e.g., labeling, service documents, advisory notices, etc.).**

Note: In some instances, it may be necessary for the manufacturer to conduct a risk/benefit analysis to justify a risk that cannot be mitigated to an acceptable level.

Additionally, ***it*** *may be necessary to audit other processes (e.g. Production and Service Controls, Purchasing) to verify that risk acceptability criteria are met, risk is controlled or reduced, and residual risk is communicated if necessary.*

Clause and regulation: [ISO 13485:2016: 4.2.1, 7.1, 7.3.3, 7.3.4; TG(MD)R Sch1 P1 2, Sch3 P1 Cl 1.4(5)(c)(iii); RDC ANVISA 16/2013: 2.4, 4.1.11, RDC ANVISA 56/2001; CMDR 10, 11, 15, 16; MHLW MO169: 6, 26, 31, 32; 21 CFR 820.30(g)]

Additional country-specific requirements:

Brazil (ANVISA):

Verify that the manufacturer has established and maintains a continuous process of risk management which covers the entire life cycle of the product. Possible hazards must be identified in both, normal and fault conditions, including those arising from human factors issues. The risk associated with those hazards, shall be calculated. Risks must be analyzed, evaluated and controlled, as necessary. Effectiveness of risk controls implemented shall be evaluated [RDC ANVISA 16/2013: 56/2001, RDC ANVISA 16/2013: 2.4].

United States (FDA):

Confirm that the manufacturer has identified the possible hazards associated with the device in both normal and fault conditions. The risks associated with the hazards, including those resulting from user error, should be calculated in both normal and fault conditions. If any risk is judged to be unacceptable, it should be reduced to acceptable levels by the appropriate means. Ensure changes to the device to eliminate or minimize hazards do not introduce new hazards [21 CFR 820.30(g); preamble comment 83].

9. *Confirm that design verification and/or design validation includes assurances that risk control measures are effective in controlling or reducing risk.*

Clause and regulation: [ISO 13485:2016: 7.1, 7.3.6, 7.3.7; TG(MD)R Sch1 P1 2, Sch3 P1 Cl 1.4(5)(c); RDC ANVISA16/2013: 2.4, 4.1.4, 4.1.8, 4.1.11; CMDR 10, 11, 15, 16; MHLW MO169: 26, 34, 35; 21 CFR 820.30(f), 820.30(g)]

Additional country-specific requirements: None

10. **Verify that design and development validation data show that the approved design meets the requirements for the specified application or intended use(s).** *Verify that design validation testing is adjusted according to the nature and risk of the product and element being validated.*

Clause and regulation: [ISO 13485:2016: 4.2.1, 7.3.7; TG(MD)R Sch1 P1 2; Sch3 P1 Cl1.4(5)(d); RDC ANVISA 16/2013: 2.4, 4.1.8, 4.1.11; CMDR 12, 18, 19; MHLW MO169: 6, 35; 21 CFR 820.30(g)]

Additional country-specific requirements: None

11. **Verify that clinical evaluations and/or evaluation of the medical device safety and performance were performed as part of design validation if required by national or regional regulations.**

Clause and regulation: [ISO 13485:2016: 4.2.1, 7.3.7; TG(MD)R Reg 3.11, Sch3 P1 Cl 1.4(5)(c)(vii), Sch3 P8; RDC ANVISA 16/2013: 4.1.8, 4.1.11, RDC ANVISA 56/2001; CMDR 12, 18, 19; MHLW MO169: 6, 35; 21 CFR 820.30(g)]

Additional country-specific requirements:

Australia (TGA):

Verify that records of the validation include clinical evidence as required by the clinical evidence procedures [TG(MD) Sch3 P1 Cl 1.4(5)(c)(vii) and TG(MD) Sch3 P8].

12. **If the medical device contains software, verify that the software was subject to the design and development process.** *Confirm that the software was included within the risk management process.*

Clause and regulation: [ISO 13485:2016: 7.3.2, 7.3.10; TG(MD)R Sch1 P1 2, Sch1 EP12.1; RDC ANVISA 16/2013: 2.4, 4.1.8, 4.1.11; CMDR 20; MHLW MO169: 30; 21 CFR 820.30(g)]

Additional country-specific requirements: None

13. **Verify that design and development changes were controlled, verified (or where appropriate validated), and approved prior to implementation.** *Confirm that any new risks associated with the design change have been identified and mitigated to the extent practical.*

Clause and regulation: [ISO 13485:2016: 4.2.1, 4.2.3, 7.1, 7.3.9, 7.3.10; TG(MD)R Sch1 P1 2, Sch3 P1 Cl 1.4(5)(f), Sch3 P1Cl1.5(4); RDC ANVISA 16/2013: 2.4, 4.1.4, 4.1.8, 4.1.10, 4.1.11, Brazilian Law 6360/76 - Art. 13; CMDR 1, 34; MHLW MO169: 6, 26, 36; 21 CFR 820.30(i)]

Additional country-specific requirements:

Australia (TGA):

Verify that the manufacturer has a process or procedure for notifying the auditing organization of a substantial change to the design process or the range of products to be manufactured [TG(MD)R Sch3 Cl1.5].

Verify that the manufacturer has a process or procedure for identifying a proposed substantial change to the design, or the intended performance, of a Class AIMD or Class III device, and to notify the assessment body prior to implementing the change [TG(MD)R Sch3 P1 Cl 1.6(4)].

Brazil (ANVISA):

If the medical device evaluated is already registered/notified with ANVISA, verify that the design change was correctly and promptly submitted to ANVISA for approval, when applicable [Brazilian Law 6360/76 - Art. 13].

Canada (HC):

Verify that the manufacturer has a process or procedure for identifying a "significant change" to a Class III or IV medical device. Verify that information about "significant changes" is submitted in a medical device license amendment application [CMDR 1, 34].

Japan (MHLW):

For the Marketing Authorization Holder, confirm if the Marketing Authorization Holder has submitted a new application, a change application, or a change notification to PMDA/ a Registered Certification Body, when applicable.[PMD Act 23-2-5.1, 23-2-5.11, 23-2-5.17, 23-2-23.1, 23-2-23.6, 23-2-23.7].

For the Registered Manufacturing Site, confirm if the site has a mechanism to communicate with the Marketing Authorization Holder about device modifications, so the Marketing Authorization Holder can take appropriate actions. If a critical medical device modification has happened in the Registered Manufacturing Site, confirm if the Registered Manufacturing Site has communicated with Marketing Authorization Holder about the change. [MHLW MO169: 29]

United States (FDA):

Verify that the organization obtained a new 510(k) or supplement to the pre-market approval if required [21 CFR 807].

Link: Measurement, Analysis and Improvement process (if a design change was made to correct a quality problem with the device); Device Marketing Authorization and Facility Registration

During the audit of the Measurement, Analysis and Improvement process, the auditors may encounter corrective actions or preventive actions that resulted in design changes. When corrective action or preventive action involves changing the design, confirm that design controls have been applied to the change, in accordance with the organization's procedures. Confirm these design changes were effective in addressing the quality issues or potential quality issues identified in corrective or preventive action. In addition, the design change should be evaluated under the organization's risk management process to ensure that changes do not introduce new hazards. Some changes may require revalidation where it is not possible to verify that requirements have been met after the change has been implemented.

The audit team should also confirm the organization has considered regulatory requirements for registration, listing, notification and licensing; and has complied with these requirements prior to marketing the changed device in the applicable regulatory jurisdictions.

14. Verify that design reviews were conducted at suitable stages as required by the design and development plan. Confirm that the participants in the reviews include representatives of functions concerned with the design and development stage being reviewed, as well as any specialist personnel needed.

Clause and regulation: [ISO 13485:2016: 4.2.1, 7.3.2, 7.3.5; TG(MD)R Sch3 P1 C1.4(5)(c)(i); RDC ANVISA 16/2013: 4.1.6, 4.1.11; MHLW MO169: 6, 30, 33; 21 CFR 820.30(e)]

Additional country-specific requirements:

United States (FDA):

Verify that procedures ensure that participants include representatives of all functions concerned with the design stage being reviewed and an individual(s) who does not have direct responsibility for the design stage being reviewed, as well as any specialists needed [21 CFR 820.30(e)].

15. Verify that design changes have been reviewed for the effect on products previously made and delivered, and that records of review results are maintained.

Clause and regulation: [ISO 13485:2016: 7.3.9; RDC ANVISA 16/2013: 4.1.10; MHLW MO169: 36; 21 CFR 820.30(i)]

Additional country-specific requirements: None

16. Determine if the design was correctly transferred to production.

Clause and regulation: [ISO 13485:2016: 4.2.1, 4.2.3, 7.3.8; RDC ANVISA 16/2013: 4.1.7, 4.1.9, 4.1.11, 4.2; MHLW MO169: 6, 30; 21 CFR 830.30(h)]

Additional country-specific requirements:

Brazil (ANVISA):

Confirm that the manufacture ensures that the design is not released for production until its approval by the persons assigned by the manufacturer and that the persons assigned review all records required to the design history file in order to ensure it is complete and the final design is compatible with the approved plans, prior to its release. Confirm that this release, including date and manual or electronic signature of the responsible is documented [RDC ANVISA 16/2013: 4.1.9, 4.1.11].

Link: Production and Service Controls, Purchasing

Verify that production processes for the device, including process validation (if required) have been defined, documented, and implemented. Confirm that potential hazards that could be introduced or exacerbated by the production process have been identified, and production controls have been established. Production processes include not only the manufacturing instructions, but also internal controls, such as the type and extent of acceptance activities, equipment calibration and maintenance intervals, environmental controls, and personnel controls.

Confirm that the manufacturer has determined the type and extent of supplier controls based on the relationship between the supplied products and services and product risk.

17. Determine, based on the assessment of the design and development process overall, whether management provides the necessary commitment to the design and development process.

Clause and regulation: [ISO 13485:2016: 4.1.3, 5.1, 5.5.1; TG(MD)R Sch3 P1 Cl 1.4(5)(b)(ii); RDC ANVISA 16/2013: 2.2.1 ; MHLW MO169: 5, 10, 15]

Medical Device Single Audit Program
Chapter 6
Process: Production and Service Controls

Audit of the Production and Service Controls process will follow audit of the Measurement, Analysis and Improvement process and the Design and Development process per the MDSAP audit sequence. Information the audit team has learned about device and quality management system nonconformities during audit of the Measurement, Analysis and Improvement process, as well as higher risk elements and essential design outputs from the design projects reviewed during audit of the Design and Development process, should be used to make decisions as to the production processes to be reviewed during the audit of the Production and Service Controls process.

Auditing the Production and Service Controls Process

Purpose: The purpose of auditing the production and service controls process (including testing, infrastructure, facilities, equipment, and servicing) is to verify that the organization's processes are capable of ensuring that products will meet specifications.

Outcomes: As a result of the audit of the Production and Service Controls process, objective evidence will show whether the organization has:

A) Defined, documented and implemented procedures to ensure production and service processes are planned, developed, conducted, controlled, and monitored to ensure conformity to specified requirements

B) Developed production and service process controls commensurate with the potential effect of the process on product risk

C) Ensured that when the results of a process cannot be verified by subsequent monitoring or measurement, the process is validated with a high degree of assurance that the process will consistently achieve the planned result

D) Implemented procedures for the validation of the application of computer software for production and service processes that affect the ability of the product to conform to specified requirements, including validation of computer software used in the quality management system

E) Maintained records for each batch of medical devices that provides information for traceability and confirmation that the batch meets specified requirements

F) Implemented controls to protect customer property, including intellectual property, confidential health information, and other forms of customer property that is used or incorporated into products

Links to Other Processes: Management; Design and Development; Measurement, Analysis and Improvement; Purchasing

Audit Tasks and Links to Other Processes:

1. **Verify that the product realization processes are planned, including any necessary controls, controlled conditions, and risk management activities required for the product to meet the specified or intended uses, the statutory and regulatory requirements related to the product, and (when applicable) unique device identifier requirements. Confirm that the planning of product realization is consistent with the requirements of the other processes of the quality management system and performed in consideration of the quality objectives.**

   Clause and regulation: [ISO 13485:2016: 7.1, 7.2.1, 7.5.1; TG(MD)R Sch 1 P1 2, Sch3 P1 Cl1.4(4), Sch3 P1 Cl1.4(5)(d)&(e); RDC ANVISA 16/2013: 2.2.1, 2.4, 4.1.2, 4.1.7, 5.1; MHLW MO169: 26, 27, 40; 21 CFR 801, 820.30(b), 820.20(a), 820.30(h), 820.70(a), 830]

   Additional country-specific requirements:

   United States (FDA):

   Confirm that the organization has determined the applicability of unique device identifier requirements per 21 CFR 801 and 21 CFR 830, has obtained the unique device identifiers from an FDA-accredited UDI-issuing agency, and the required data elements have been entered in the Global Unique Device Identification Database (GUDID) [21 CFR 801, 830].

Link: Management
Confirm when necessary that the quality objectives related to the product were considered for inclusion in management review.

2. **Review production processes considering the following criteria. Select one or more production processes to audit.**

   Reminder: Information the audit team has learned about device and quality management system nonconformities during audit of the Measurement, Analysis and Improvement process, as well as higher risk elements and essential design outputs from the design projects reviewed during audit of the Design and Development process should be used to make decisions as to the production processes to be reviewed.

   Priority criteria for selection:

   - Corrective and preventive action indicators of process problems or potential problems
   - *Use of the production process for higher risk products*
   - Use of production processes that directly impact the ability of the device to meet its essential design outputs
   - New production processes or new technologies
   - Use of the process in manufacturing multiple products
   - Processes that operate over multiple shifts
   - Processes not covered during previous audits

3. **For each selected process, determine if the production and service process is planned and conducted under controlled conditions that include the following:**

   - **the availability of information describing product characteristics**
   - **the availability of documented procedures, requirements, work instructions, and reference materials, reference measurements, and criteria for workmanship**
   - **the use of suitable equipment**
   - **the availability and use of monitoring and measuring devices**
   - **the implementation of monitoring and measurement of process parameters and product characteristics during production**
   - **the implementation of release, delivery and post-delivery activities**
   - **the implementation of defined operations for labeling and packaging**
   - **the establishment of documented requirements for changes to methods and processes**

   Clause and regulation: [ISO 13485:2016: 7.5.1, 8.2.5, 8.2.6; TG(MD)R Sch3 P1 Cl1.4(5)(d)&(e); RDC ANVISA 16/2013: 3.1.3, 4.2, 5.1, 5.2, 5.3, 5.4, 5.6, 5.6.1, 5.6.2; MHLW MO169: 40, 57, 58, 59; 21 CFR 820.70(a), 820.70(b), 820.75, 820.120, 820.130]

   Additional country-specific requirements: None

4. **Determine if the organization has established documented requirements for product cleanliness including any cleaning prior to sterilization, cleanliness requirements if provided non-sterile, and assuring that process agents are removed from the product if required.**

   Clause and regulation: [ISO 13485:2016: 4.2.1, 4.2.3, 6.4.2, 7.5.2; TG(MD)R Sch3 P1 Cl1.4(5)(d); RDC ANVISA 16/2013: 5.1.3.1, 5.1.3.4, 5.1.5.3; MHLW MO169: 6, 25, 41; 21 CFR 820.70(c), 820.70(d), 820.70(e), 820.70(h)]

   Additional country-specific requirements:

   Brazil (ANVISA):

   Confirm that a pest control program has been established and where chemicals are used as part of the pest control program, the company must ensure that they do not affect product quality [RDC ANVISA 16/2013: 5.1.3.4].

   Verify that the manufacturer has established and maintains housekeeping procedures and schedules for production areas and warehouses, in conformance with production specifications [RDC ANVISA 16/2013: 5.1.3.1].

5. **Verify that the organization has determined and documented the infrastructure requirements to achieve product conformity, including buildings, workspace, process equipment, and supporting services. Confirm that buildings, workspaces, and supporting services allow product to meet requirements. Verify that there are documented and implemented requirements for maintenance of process equipment where important for product quality, and that records of maintenance are maintained.**

   Clause and regulation: [ISO 13485:2016: 4.2.1, 6.3, 7.5.1; RDC ANVISA 16/2013: 5.1.2, 5.1.5; CMDR 14; MHLW MO169: 6, 24, 40; 21 CFR 820.70(g), 820.70(f)]

Additional country-specific requirements:

Brazil (ANVISA):

Verify that manufacturing facilities are configured in order to provide adequate means for people flow. [RDC ANVISA 16/2013: 5.1.2].

6. Verify documented requirements have been established, implemented and maintained for:

- **health, cleanliness, and clothing of personnel that could have an adverse effect on product quality**
- **monitoring and controlling work environment conditions that can have an adverse effect on product quality**
- **training or supervision of personnel who are required to work under special environmental conditions**
- **controlling contaminated or potentially contaminated product (including returned products) in order to prevent contamination of other product, the work environment, or personnel**

Clause and regulation: [ISO 13485:2016: 4.2.1, 6.4; TG(MD)R Sch1 P2 7.2, 8; RDC ANVISA 16/2013: 5.1.3; MHLW MO169: 6, 25; 21 CFR 820.70(c), 820.70(d), 820.70(e)]

Additional country-specific requirements:

Brazil (ANVISA):

Verify that biosafety standards are used, when applicable [RDC ANVISA 16/2013: 5.1.3.6].

7. Determine if the selected process(es) and sub-process(es) have been reviewed, including any outsourced processes, to determine if validation of these processes is required.

Clause and regulation: [ISO 13485:2016: 4.2.1, 4.1.6, 7.5.6; TG(MD)R Sch1 P2 8.2, 8.3; Sch3 P1 1.4(5)(d), RDC ANVISA16/2013: 5.5.2, 5.5.3; MHLW MO169: 6, 45; 21 CFR 820.75(a)]

Additional country-specific requirements:

Brazil (ANVISA):

Verify that analytical methods, supporting auxiliary systems for production and environmental control that can adversely affect product quality or the quality system are validated, periodically reviewed and, when necessary, revalidated according to documented procedures [RDC ANVISA 16/2013: 5.5.2, 5.5.3].

United States (FDA):

Process validation is required for sterilization, aseptic processing, injection molding, and welding [21 CFR 820.75; preamble comment 143].

Link: Purchasing
The audit team may encounter situations where the organization outsources processes that require validation. During the review of the Purchasing process, review the controls the organization has instituted over suppliers that perform validated processes. This can be particularly important for higher risk validated processes performed by suppliers, since the finished device manufacturer does not have immediate control over those processes.

8. **Verify that the selected process(es) has been validated according to documented procedures if the result of the process cannot be fully verified or can be verified, but is not. Confirm that the validation demonstrates the ability of the process(es) to consistently achieve the planned result. In the event changes have occurred to a previously validated process, confirm that the process was reviewed and evaluated, and re-validation was performed where appropriate.**

Clause and regulation: [ISO 13485:2016: 4.2.1, 7.5.6; TG(MD)R Sch1 P1 2(1), Sch3 P1 1.4(5)(d); RDC ANVISA 16/2013: 1.2.18, 5.5.1; MHLW MO169: 6, 45; 21 CFR 820.75(a), 820.75(c)]

Additional country-specific requirements:

Australia (TGA):

Confirm that methods of validation have regard to the generally acknowledged state of the art (e.g. current Medical Device Standard Orders - MDSO, ISO/IEC Standards, BP, EP, USP etc.) [TG Act s41CB, TG(MD)R Sch 1 P1 2(1)].

9. **If product is supplied sterile (see Annex 2):**

- **Verify the sterilization process is validated, periodically re-validated, and records of the validation is available**
- **Verify that devices sold in a sterile state are manufactured and sterilized under appropriately controlled conditions**
- **Determine if the sterilization process and results are documented and traceable to each batch of product**

Clause and regulation: [ISO 13485:2016: 4.2.1, 7.5.5, 7.5.6, 7.5.7; TG(MD)R Sch1 2(1) & 8.3, Sch3 P1 1.4(5)(d); RDC ANVISA 16/2013: 5.1.6, 5.5; CMDR 17; MHLW MO169: 6, 44, 45, 46; 21 CFR 820.75, 820.184(d)]

Additional country-specific requirements:

Australia (TGA):

Verify that methods of sterilization validation have regard to the generally acknowledged state of the art (e.g. current Australian Medical Device Standard Orders - MDSO, ISO 11135, ISO 11137) [TG(MD)R Sch1 P1 2(1)].

10. **Verify that the system for monitoring and measuring of product characteristics is capable of demonstrating the conformity of products to specified requirements.** *Confirm that product risk is considered in the type and extent of product monitoring activities.*

Clause and regulation: [ISO 13485:2016: 7.1, 7.5.1, 8.1, 8.2.6; TG(MD)R Sch1 P1 2, Sch3 P1 1.4(5)(b)&(e); RDC ANVISA 16/2013: 2.4, 5.1.1, 9.1; MHLW MO169: 26, 40, 54, 58; 21 CFR 820.70(a), 820.250(a)]

Additional country-specific requirements: None

11. **Verify that the processes used in production and service are appropriately controlled, monitored, operated within specified limits and documented in the product realization records.** *In addition, verify that risk control measures identified by the manufacturer for production processes are implemented, monitored and evaluated.*

Clause and regulation: [ISO 13485:2016: 7.1, 7.5.1, 8.1, 8.2.5, TG(MD)R Sch1 P1 2, Sch3 P1 1.4(5)(b)&(e); RDC ANVISA 16/2013: 2.4, 5.1.1, 5.1.6, 8.2, 9.1; MHLW MO169: 26, 40, 54, 57; 21 CFR 820.70(a), 820.75(b), 820.250]

Additional country-specific requirements: None

Link: Design and Development

The design outputs for a device include documents such as diagrams, drawings, specifications, procedures, and the production processes that are essential to the proper manufacturing of the device. Production processes can include not only the manufacturing instructions, but also internal controls, such as the type and extent of acceptance activities, equipment calibration and maintenance intervals, environmental controls, and personnel controls. During the audit of the Production and Service Controls process, consider reviewing production processes that have the highest risk or greatest effect on the essential design outputs.

12. **Verify that personnel are competent to implement and maintain the processes in accordance with the requirements identified by the organization.**

Clause and regulation: [ISO 13485:2016: 6.2; RDC ANVISA 16/2013: 2.3.2; MHLW MO169: 22; 21 CFR 820.25, 820.70(d), 820.75(b)]

Additional country-specific requirements: None

Link: Management

During the audit of the Production and Service Controls process, ensure that employees who are involved in key operations that affect product realization and product quality have been trained in their specific job tasks, as well as the quality policy and objectives. When appropriate, review the training records for those employees whose activities have contributed to process nonconformities.

13. Confirm that the organization has determined the monitoring and measuring devices needed to provide evidence of conformity to specified requirements. Verify that the monitoring and measuring equipment used in production and service control has been identified, adjusted, calibrated and maintained, and capable of producing valid results.

Clause and regulation: [ISO 13485:2016: 7.5.1, 7.6; TG(MD)R Sch3 P1 1.4(5)(e); RDC ANVISA 16/2013: 5.1.5, 5.4; MHLW MO169: 40, 53; 21 CFR 820.70(g), 820.72]

Additional country-specific requirements: None

14. Confirm that the organization assesses (and records) the validity of previous measurements when equipment is found not to conform to specified requirements, and takes appropriate action on the equipment and any product affected. Verify that the control of the monitoring and measuring devices is adequate to ensure valid results. Confirm that monitoring and measuring devices are protected from damage or deterioration.

Clause and regulation: [ISO 13485:2016: 7.6; TG(MD)R Sch3 P1 1.4(5)(e); RDC ANVISA 16/2013: 5.4; MHLW MO169: 53; 21 CFR 820.72(a)]

Additional country-specific requirements: None

15. If the selected process is software controlled or if software is used in production equipment or the quality management system, verify that the software is validated for its intended use. Software validation may be part of equipment qualification.

Clause and regulation: [ISO 13485:2016: 4.1.6, 7.5.6, 7.6; RDC ANVISA 16/2013: 5.5.2; MHLW MO169: 45, 53; 21 CFR 820.70(i)]

Additional country-specific requirements: None

16. Determine if the manufacturer has established and maintained a file for each type of device that includes or refers to the location of device specifications, production process specifications, quality assurance procedures, traceability requirements, and packaging, labeling specifications, and when applicable requirements for installation and servicing. *Confirm that the manufacturer determined the extent of traceability based on the risk posed by the device in the event the device does not meet specified requirements.*

Clause and regulation: [ISO 13485:2016: 4.2.1, 4.2.3, 7.1, 7.5.8, 7.5.9.1; TG(MD)R Sch3 P1 1.4(5) (c),(d),(e) & 1.9; RDC ANVISA 16/2013: 1.2.26, 2.4, 4.2, 5.2, 6.4; CMDR 9(2), 21-23, 52-56, 66-68; MHLW MO169: 6, 26, 47, 48; 21 CFR 820.65, 820.181]

Additional country-specific requirements:

Brazil (ANVISA):

Verify that the manufacturer has established and maintains procedures to ensure integrity and to prevent accidental mixing of labels, instructions, and packaging materials [RDC ANVISA 16/2013: 5.2.2.1].

Confirm that the manufacturer has ensured that labels are designed, printed and, where applicable, applied so that they remain legible and attached to the product during processing, storage, handling and use [RDC ANVISA 16/2013: 5.2.2.2].

Canada (HC):

Verify that the manufacturer maintains objective evidence that devices meet the safety and effectiveness requirements of the CMDR [CMDR 9(2)].

Verify that devices sold in Canada have labeling that conforms to Canadian English and French language requirements and contains the manufacturer's name and address, device identifier, control number (for Class III and IV devices), contents of packaging, sterility, expiry, intended use, directions for use and any special storage conditions [CMDR 21-23].

Verify that the manufacturer maintains distribution records in respect of a device that will permit a complete and rapid withdrawal of the device from the market [CMDR 52-56].

United States (FDA):

If a control number is required for traceability, confirm that such control number is on or accompanies the device throughout distribution [21 CFR 820.120(e)].

Link: Design and Development
During the design and development of the device, the essential design outputs for the proper functioning of the device should have been identified. Raw materials, components, and subassemblies should have been considered for traceability if their nonconformance could result in the finished device not meeting its specified requirements and essential functions.

17. Determine if the manufacturer has established and maintained a record of the amount manufactured and approved for distribution for each batch of medical devices, the record is verified and approved, the device is manufactured according to the file referenced in task 16, and the requirements for product release were met and documented.

Clause and regulation: [ISO 13485:2016: 4.2.1, 7.5.1, 7.5.8, 7.5.9.1, 8.2.6; RDC ANVISA 16/2013: 3.2, 5.2, 6.4; MHLW MO169: 6, 40, 47, 48, 58; 21 CFR 820.120, 820.184]

Additional country-specific requirements:

Brazil (ANVISA):

Verify that the device history record of the product includes or refers to the following information: date of manufacture; components used; quantity manufactured; results of inspections and tests; parameters of special processes; quantity released for distribution; labeling; identification of the serial number or batch of production; and final release of the product [RDC ANVISA 16/2013: 3.2.1].

Verify that labeling has not been released for storage or use until a designated individual has examined the labeling for accuracy. The approval, including date, name, and physical or electronic signature of the person responsible, must be documented in the device history record [RDC ANVISA 16/2013: 5.2.2.3].

United States (FDA):

Verify that labeling is not released for storage or use until a designated individual has examined the labeling for accuracy including, where applicable, the correct unique device identifier (UDI) or Universal Product Code (UPC), expiration date, control number, storage instructions, handling instructions, and any additional processing instructions [21 CFR 820.120(b)].

Confirm that labeling is stored in a manner that provides proper identification and prevents mix-ups. Verify that labeling and packaging operations are controlled to prevent labeling mix-ups [21 CFR 820.120(c) and (d)].

Verify that the label and labeling used for each production unit, lot, or batch are documented in the batch record, as well as any control numbers used [21 CFR 820.120(e), 820.184(e)].

18. If the organization manufactures active or nonactive implantable medical devices, life-supporting or life-sustaining devices, confirm that the manufacturer maintains traceability records of all components, materials, and work environment conditions (if these could cause the medical device to not satisfy its specified requirements) in addition to records of the identity of personnel performing any inspection or testing of these devices. Confirm that the organization requires that agents or distributors of these devices maintain distribution records and makes them available for inspection. Verify that the organization records the name and address of shipping consignees for these devices.

Clause and regulation: [ISO 13485:2016: 4.2.1, 7.5.9.2, 8.2.6; MHLW MO169: 6, 49, 59; 21 CFR 820.65]

Additional country-specific requirements:

Canada (HC):

Verify that the manufacturer has identified Schedule 2 implants and provides implant registration cards with devices or employs another suitable system approved by Health Canada [CMDR 66-68].

Verify that the manufacturer of devices that are listed on Schedule 2 of the Medical Devices Regulations maintains distribution records of these devices as well as any information received on implant registration cards related to these Schedule 2 devices [CMDR 54].

United States (FDA):

Verify that the manufacturer has implemented a tracking system for devices for which the manufacturer has received a tracking order from FDA. The tracking system must ensure the manufacturer is able to track the device to the end-user. The manufacturer must conduct periodic audits of the tracking system [21 CFR 821].

19. Verify that product status identification is adequate to ensure that only product which has passed the required inspections and tests is dispatched, used, or installed.

Clause and regulation: [ISO 13485:2016: 7.5.8; RDC ANVISA 16/2013: 6.1.2, 6.4; MHLW MO169: 47, 50; 21 CFR 820.86]

Additional country-specific requirements: None

20. Verify that the organization has implemented controls to identify, verify, protect, and safeguard customer property provided for use or incorporation into the product. Verify that the organization treats patient information and confidential health information as customer property.

Clause and regulation: [ISO 13485:2016: 7.5.10; MHLW MO169: 51]

Additional country-specific requirements: None

21. Verify that acceptance activities assure conformity with specifications and are documented. *Confirm that the extent of acceptance activities is commensurate with the risk posed by the device.*

Note: Acceptance activities apply to any incoming component, subassembly, or service, regardless of the manufacturer's financial or business arrangement with the supplier.

Clause and regulation: [ISO 13485:2016: 4.2.1, 7.4.3, 7.5.8, 8.2.6; TG(MD)R Sch1 P1 2, Sch3 P1 Cl1.4(5)(d); RDC ANVISA 16/2013: 5.3.1, 5.3.2, 5.3.3, 5.3.4, 9.2; MHLW MO169: 6, 39, 47, 58, 59; 21 CFR 820.80, 820.250(b)]

Additional country-specific requirements:

Brazil (ANVISA):

Verify that sampling plans are defined and based on valid statistical rationale. Each manufacturer must establish and maintain procedures to ensure that sampling methods are suitable for their intended use and are reviewed regularly. A review of sampling plans should consider the occurrence of nonconforming product, quality audit reports, complaints and other indicators [RDC ANVISA 16/2013: 9.2].

United States (FDA):

Verify that the manufacturer establishes and maintains procedures to ensure that sampling methods are adequate for their intended use and ensure that when changes occur, the sampling plans are reviewed [21 CFR 820.250(b)].

Link: Purchasing, Design and Development

The audit team should consider reviewing the purchasing controls and requirements for suppliers of higher risk products. The audit team should also consider reviewing the purchasing controls and requirements for suppliers of products that undergo minimal acceptance activities at the device manufacturer, particularly if the supplied product is manufactured using a process that requires validation. During the review of acceptance activities, if the audit team encounters situations where records of acceptance activities for supplied product reveal products that do not meet specified requirements, consider selecting those suppliers for review during the audit of the organization's Purchasing process.

The establishment of the necessary purchasing controls and required acceptance activities is a design output. The degree of the purchasing controls necessary and extent of acceptance activities should be based on the risk posed by the product not meeting its specified requirements and essential design outputs.

22. Verify that the identification, control, and disposition of nonconforming products is adequate, ***based on the risk the nonconformity poses to the device meeting its specified requirements.***

Clause and regulation: [ISO 13485:2016: 7.5.8, 8.3; TG(MD)R Sch1 P1 2, Sch3 P1 Cl1.4(5)(b); RDC ANVISA 16/2013: 6.5.1, 6.5.2; MHLW MO169: 47, 50, 60; 21 CFR 820.60, 820.90(a), 820.86, 820.100(a)]

Additional country-specific requirements: None

Link: Measurement, Analysis and Improvement

The audit team should be mindful of any instances where the acceptance of nonconforming product has led to finished devices not meeting specified requirements. This information can often be found in records of acceptance activities and complaint records. During the review of the organization's corrective and preventive actions, the auditors may have noted instances where nonconforming products were found to be the underlying cause of quality problems and complaints. The audit team should consider reviewing the organization's handling and evaluation of nonconforming products that were determined to be the underlying cause of quality problems. Ensure that the analysis of data regarding nonconforming product is considered as an input to the organization's Measurement, Analysis and Improvement process and that corrective or preventive actions have been implemented when necessary.

23. If a product needs to be reworked, confirm that the manufacturer has made a determination of any adverse effect of the rework upon the product. Verify that the rework process has been performed according to an approved procedure, that the results of the rework have been documented, and that the reworked product has been re-verified to demonstrate conformity to requirements.

Clause and regulation: [ISO 13485:2016: 8.3.4; RDC ANVISA 16/2013: 6.5.3; MHLW MO169: 60; 21 CFR 820.90(b)]

Additional country-specific requirements: None

24. Verify that procedures are established and maintained for preserving the conformity of product and constituent parts of a product during internal processing, storage, and transport to the intended destination. This preservation encompasses identification, handling, packaging, storage, and protection, including those products with limited shelf-life or requiring special storage conditions.

Clause and regulation: [ISO 13485:2016: 7.5.8, 7.5.11; TG(MD)R Sch1 P1 5; RDC ANVISA 16/2013: 5.2.1, 6.1.1, 6.2.1; CMDR 14; MHLW MO169: 47, 52; 21 CFR 820.130, 820.140, 820.150, 820.160(a)]

Additional country-specific requirements: None

25. Confirm that the organization performs a review of the customer's requirements, including the purchase order requirements, prior to the organization's commitment to supply a product to a customer. Verify that the organization maintains documentation required by regulatory authorities regarding maintenance of distribution records.

Clause and regulation: [ISO 13485:2016: 4.2.1, 5.2, 7.2.2, 7.5.9; RDC ANVISA 16/2013: 6.3; MHLW MO169: 6, 11, 28, 48, 49; 21 CFR 820.160(a)]

Additional country-specific requirements:

Brazil (ANVISA):

Verify that the manufacturer maintains distribution records which include or make reference to: the name and address of the consignee, the identification and quantity of products shipped, the date of dispatch, and any numerical control used for traceability [RDC ANVISA 16/2013: 6.3].

Canada (HC):

Verify that the manufacturer maintains distribution records that contain sufficient information to permit complete and rapid withdrawal of the medical device from the market [CMDR 52-53].

Verify that distribution records of a device are retained by the manufacturer in a manner that will allow for timely retrieval, for the longer of (a) the projected useful life of the device; and (b) two years after the date the device was shipped [CMDR 55-56].

United States (FDA):

Verify that the manufacturer maintains distribution records which include or refer to the location of the name and address of the initial consignee, the identification and quantity of devices shipped; and any control numbers used [21 CFR 820.160(b)].

26. If installation activities are required, confirm that records of installation and verification activities are maintained.

Clause and regulation: [ISO 13485:2016: 7.5.3; RDC ANVISA 16/2013: 8.1; MHLW MO169: 42; 21 CFR 820.170]

Additional country-specific requirements: None

27. Determine if servicing activities are conducted and documented in accordance with defined and implemented instructions and procedures. Confirm that service records are used as a source of quality data in the Measurement, Analysis and Improvement process.

Clause and regulation: [ISO 13485:2016: 4.2.1, 7.5.4, 8.4; RDC ANVISA 16/2013: 8.2; MHLW MO169: 6, 43, 61; 21 CFR 820.200]

Additional country-specific requirements:

Brazil (ANVISA):

Confirm that the manufacturer has established and maintains procedures to ensure that records of servicing activities are kept with the following information: the product serviced; the control number of product serviced; the date of completion of service; identification of the service provider; description of service performed; and results of inspections and tests performed [RDC ANVISA 16/2013: 8.2.1].

Verify that the manufacturer periodically reviews the records of servicing activities. In cases where the analysis identifies trends that pose danger or records involving death or serious injury, a corrective or preventive action must be initiated [RDC ANVISA 16/2013: 8.2.2].

United States (FDA):

Verify that each manufacturer who receives a service report that represents an event that must be reported to FDA as a medical device report automatically considers the report a complaint [21 CFR 820.200(c)].

Confirm that service reports are documented and include the name of the device serviced, any unique device identifier (UDI) or universal product code (UPC), and any other device identification(s) and control number(s) used, and the date of service [21 CFR 820.200(d)].

Link: Measurement, Analysis and Improvement

During the audit of the organization's Measurement, Analysis and Improvement process, the audit team may have already confirmed that quality data from the analysis of servicing activities is analyzed for possible corrective or preventive action. When reviewing the organization's service reports, the audit team should be mindful of service reports that appear to be product complaints. Ensure that service reports that appear to be complaints have been appropriately addressed. In some instances, a similar quality problem for a particular device may be found in the service reports and the complaint records. In these instances, confirm that the organization is taking appropriate corrections and/or corrective actions considering a similar quality problem is observed in multiple data sources.

28. ***When appropriate, verify that risk control and mitigation measures are applied to transport, installation and servicing, in accordance with the organization's risk management practices.***

Clause and regulation: [ISO 13485:2016: 7.1, 7.5.1, 7.5.3, 7.5.4, 7.5.11; TG(MD)R Sch1 P1 2; RDC ANVISA 16/2013: 2.4; MHLW MO169: 26, 40, 42, 43, 52; 21 CFR 820.160(a), 820.170(a), 820.200(a)]

Additional country-specific requirements: None

29. Determine, based on the assessment of the production and service control process overall, whether management provides the necessary commitment to the production and service control process to ensure devices meet specified requirements and quality objectives.

Clause and regulation: [ISO 13485:2016: 5.1; 5.2; RDC ANVISA 16/2013: 2.2.1; MHLW MO169: 10, 11]

Medical Device Single Audit Program
Chapter 7
Process: Purchasing

The Purchasing process is integral to the other processes of the MDSAP audit sequence. As the audit is being performed of the organization's Measurement, Analysis and Improvement process, Design and Development process, and Production and Service Controls process, the audit team should be assessing the affect purchased product has on the quality of the finished device. The audit team should be using information learned about actual and potential product and process nonconformities during the audit of the Measurement, Analysis and Improvement process, higher risk elements and essential design outputs from the design projects reviewed during audit of the Design and Development process, in addition to significant outsourced product and production processes identified during the audit of the Production and Service Controls process to make decisions as to supplier evaluation files to be reviewed during the audit of the Purchasing process. The organization's Purchasing process may be reviewed in conjunction with the Measurement, Analysis and Improvement process, the Design and Development process, and the Production and Service Controls process, being mindful of the MSDAP process linkages. The Purchasing process should be considered a critical process for those organizations that outsource essential activities such as design and development and/or production to one or more suppliers.

Purpose: The purpose of auditing the Purchasing process is to verify that the manufacturer's processes ensure that products (e.g. components, materials and services provided by suppliers, including contractors and consultants) are in conformance with specified purchase requirements, including quality management system requirements. This is particularly important for those organizations that outsource activities such as design and development and/or production to one or more suppliers, and when the supplied product or service cannot be verified by inspection (e.g., sterilization services). Suppliers include those providers of any product received from outside the manufacturer, including corporate or financial affiliates, where the product has an effect on subsequent product realization or the final product.

Outcomes: As a result of the audit of the Purchasing process, objective evidence will show whether the manufacturer has:

A) Defined, documented and implemented procedures to ensure purchased or otherwise supplied products conform to specified purchase requirements

B) Established criteria for the selection, evaluation and re-evaluation of suppliers based on the type and significance of the product purchased and the impact of the supplied product on subsequent product realization or the quality of the finished device

C) Performed the evaluation and selection of suppliers based on the capability of the supplier to meet specified requirements

D) Ensured the continued capability of suppliers to provide quality products that meet specified purchase requirements through re-evaluation

E) Determined and implemented an appropriate combination of controls applied to suppliers in conjunction with acceptance verification activities to ensure conformity to product and quality management system requirements, based on the impact of the supplied product on the finished device

Links to Other Processes: Management; Design and Development; Measurement, Analysis and mprovement; Production and Service Controls

Audit Tasks and Links to Other Processes:

1. Verify that planning activities describe or identify products to purchase and processes to outsource, the specified requirements for purchased products, the requirements for purchasing documentation and records, purchasing resources, the activities for purchased product acceptance, and *risk management* in supplier selection and purchasing.

Clause and regulation: [ISO 13485:2016: 4.1.2, 4.1.3, 4.1.5, 7.1, 7.4.1, 7.4.2, 7.4.3; TG(MD)R Sch1 P1 2, Sch3 P1 Cl1.4(5)(d)(ii); RDC ANVISA16/2013: 2.5.1, 2.4; MHLW MO169: 5, 26, 37, 38, 39; 21 CFR 820.20, 820.50]

Additional country-specific requirements: None

Links: Design and Development, Management
During the review of a design project, confirm that the organization has considered the effect of purchased product on the essential design outputs. For suppliers that provide product and services related to the essential design outputs, the degree of purchasing controls necessary is commensurate with the effect of the supplied product on the proper functioning of the finished device. During the audit of the Purchasing process, confirm when necessary that the degree of control over suppliers of purchased product has been made based on the risk the supplied product poses to the ability of the finished device to meet specified requirements.

Additionally, confirm when necessary that the quality objectives related to the purchased product were considered for inclusion in management review.

2. Select one or more supplier evaluation files to audit.

Priority criteria for selection:

- **Indications of problems with supplied products or processes from audit of the** Measurement**, Analysis and Improvement process**
- *Suppliers of higher risk products or processes*
- **Suppliers who provide products or services that directly impact the design outputs required for proper functioning of the device**
- **Suppliers of processes that require validation or revalidation**
- **Newly approved suppliers of products or services**
- **Suppliers of products or services used in the manufacturing of multiple products**

- **Suppliers of components or services not covered during previous audits**

3. **Verify that procedures for ensuring purchased product conforms to purchasing requirements have been established and documented.**

   Clause and regulation: [ISO 13485:2016: 7.4.1; TG(MD)R Sch3 P1 Cl1.4(5)(d)(ii); RDC ANVISA 16/2013: 2.5.1; MHLW MO169: 37; 21 CFR 820.50]

   Additional country-specific requirements: None

4. **Verify that the procedures assure the type and extent of control applied to the supplier and the purchased product is dependent upon the effect of the purchased product on subsequent product realization or the final product. Verify that criteria for the selection, evaluation and re-evaluation of suppliers have been established and documented.**

   Clause and regulation: [ISO 13485:2016: 7.4.1; RDC ANVISA 16/2013: 2.5.2, 2.5.3; MHLW MO169: 37; 21 CFR 820.50]

   Additional country-specific requirements: None

5. **Verify that suppliers are selected based on their ability to supply product or a service in accordance with the manufacturer's specified requirements.**

   Confirm that the degree of control applied to the supplier is commensurate with the significance of the supplied product or service on the quality of the finished device, based on risk. **Verify that records of supplier evaluations are maintained.**

   Clause and regulation: [ISO 13485:2016: 4.2.1, 7.1, 7.4.1; TG(MD)R Sch1 P1 2; RDC ANVISA 16/2013: 2.3.3, 2.5.3, 2.4; MHLW MO169: 6, 26, 37; 21 CFR 820.50(a)]

   Additional country-specific requirements: Australia (TGA):

   If the manufacturer outsources to the Australian Sponsor; a quality management system requirement, an obligation on the manufacturer from the Australian regulations, or where the manufacturer appoints the Sponsor to act on their behalf for dealings with the TGA, verify that the manufacturer treats the Sponsor as a supplier and has adequate supplier controls included in a written agreement [TG Act 41FN] for those activities. For example, making applications on behalf of the manufacturer to the TGA [TG Act s41EB], representing the manufacturer in interactions with the TGA [TG Act s41FN(3)], adverse event reporting, as the first point for handling customer complaints, or as an intermediary in recalls of products [TG(MD) Regs Schedule 3 - Part 1:1.4(3)], in the notification of substantial changes to a kind of medical device (TG Act s41BE) that may require a variation to an entry in the Australian Register of Therapeutic Goods (TG Act s9D), for the provision of records [TG(MD) Regs Schedule 3 - Part 1:1.5, 1.9], or other matters that may be required to allow the Sponsor to fulfill market authorisation conditions [TG Act Part 4-5 Div 2].

   Canada (HC):

   Verify that any regulatory correspondent used by the manufacturer is treated as a supplier and is adequately qualified.

Japan (MHLW):

(For Marketing Authorization Holder)
If the Marketing Authorization Holder (MAH) has outsourced any process that affects product conformity with requirements, to a Registered Manufacturing Site(RMS), then verify the MAH has performed the necessary verification that the RMS has an appropriate quality management system. If the site of a supplier is a Registered Manufacturing Site, then verify the MAH has performed the necessary verification that the supplier has an appropriate quality management system [MHLW MO169: 65].

(For Registered Manufacturing Site)
If the RMS has outsourced any processes that affects product conformity with requirements, to another RMS, then verify the outsourcing RMS has performed the necessary verification that the outsourced RMS has an appropriate quality management system. If the site of a supplier is a RMS, then verify the purchase controlling RMS has performed the necessary verification that the supplier has an appropriate quality management system [MHLW MO169: 65].

Links: Design and Development, Production and Service Controls
The establishment of the necessary purchasing controls and required acceptance activities is a design output. The degree of the purchasing controls necessary and extent of acceptance activities should be based on the risk posed by the product not meeting its specified requirements and essential design outputs.

6. Verify that the manufacturer maintains effective controls over suppliers and product, so that specified requirements continue to be met.

Clause and regulation: [ISO 13485:2016: 7.4.1; RDC ANVISA 16/2013: 2.5.3; MHLW MO169: 37; 21 CFR 820.50(a)]

Additional country-specific requirements: None

Links: Production and Service Controls, Measurement, Analysis and Improvement Organizations are expected to define, document, and implement systems and procedures for acceptance activities to verify that supplied products conform to specified requirements. Effective acceptance procedures and systems directly affect the ability of an organization to demonstrate that supplied products meets specifications. During the audit of the Production and Service Controls process, confirm that the appropriate acceptance activities have been implemented and monitored to ensure the received product meets specified requirements. Additionally, organizations are required to determine, collect, and analyze appropriate data to demonstrate the ability of suppliers to provide acceptable product. During the audit of the Measurement, Analysis and Improvement process, confirm that analysis of supplier performance data has been performed and considered for corrective or preventive action when necessary.

7. *Confirm that the re-evaluation of the capability of suppliers to meet specified requirements is performed at intervals consistent with the significance of the product on the finished device.*

Clause and regulation: [ISO 13485:2016: 7.4.1; TG(MD)R Sch1 P1 2; RDC ANVISA 16/2013: 2.5.2, 2.4; MHLW MO169: 37; 21 CFR 820.50(a)]

Additional country-specific requirements: None

Link: Measurement, Analysis and Improvement
The frequency and extent of supplier re-evaluation activities may be based, in part, on the performance of the supplier as demonstrated by such activities as statistical monitoring of the supplier, monitoring of complaints and nonconformities related to supplied product, and corrective or preventive actions related to the supplier.

8. *Verify that the organization assures the adequacy of purchasing requirements for products and services that suppliers are to provide, and defines risk management activities and any necessary risk control measures.* **Confirm that the manufacturer ensures the adequacy of specified purchase requirements prior to their communication to the supplier and that a written agreement with the supplier is established in which suppliers has to notify the organization about changes in the product.**

Clause and regulation: [ISO 13485:2016: 4.2.1, 7.4.2, TG(MD)R Sch1 P1 2; RDC ANVISA 16/2013: 2.4, 2.5.4, 2.5.6; MHLW MO169: 6, 38; 21 CFR 820.50(b)]

Additional country-specific requirements:

Brazil (ANVISA):

Confirm that purchase orders are approved by a designated person. This approval, including date and signature, shall be documented [RDC ANVISA 16/2013: 2.5.4].

9. **Verify that the organization documents purchasing information, including where appropriate the requirements for approval of product, procedures, processes, equipment, qualification of personnel, sterilization services, and other quality management system requirements. Confirm that documents and records for purchasing are consistent with traceability requirements where applicable.**

Clause and regulation: [ISO 13485:2016: 7.4.2, 7.5.9; RDC ANVISA 16/2013: 2.3.3, 2.5.4, 2.5.5, 6.4; MHLW MO169: 38, 48, 49; 21 CFR 820.50(b), 820.65, 820.160]

Additional country-specific requirements: None

10. **Confirm that the verification (inspection or other activities) of purchased products is adequate to ensure specified requirements are met.** *Confirm that*

the manufacturer has implemented an appropriate combination of controls applied to the supplier, the specification of purchase requirements, and acceptance verification activities that are commensurate with the risk of the supplied product upon the finished device. **Verify that records of verification activities are maintained.**

Clause and regulation: [ISO 13485:2016: 4.2.1, 7.1, 7.4.3; TG(MD)R Sch1 P1 2, Sch3 1.4(5)(e); RDC ANVISA 16/2013: 2.4, 2.5.2, 3.3 5.3.1, 5.3.2, 5.3.3; MHLW MO169: 6, 26, 39; 21 CFR 820.50, 820.80(b)]

Additional country-specific requirements:

Brazil (ANVISA):

Verify that the manufacturer has established and maintains procedures to ensure the retention of components, raw materials, in-process products and returned products until inspections, tests or other specified verifications have been performed and documented [RDC ANVISA 16/2013: 5.3.3].

Link: Production and Service Controls
The audit team may encounter instances where product has been deemed acceptable by the successful completion of acceptance activities but the product is later shown to not meet specified requirements (e.g. failure of the device due to nonconforming component leading to product complaint). This can be an indication that the acceptance activities are not sufficient to identify nonconformities; or were not appropriately conducted. Confirm that the organization has taken the appropriate action to determine the suitability of the acceptance activities. For example, the organization may need to validate the test method used for incoming acceptance to ensure the test method is actually capable of identifying nonconforming product.

11. Verify that data from the evaluation of suppliers, verification activities, and purchasing are considered as a source of quality data for input into the Measurement, Analysis and Improvement process.

Clause and regulation: [ISO 13485:2016: 8.4; RDC ANVISA 16/2013: 7.1.1.1; MHLW MO169: 61; 21 CFR 820.100]

Additional country-specific requirements: None

Link: Measurement, Analysis and Improvement

The organization must determine the appropriate acceptance activities for supplied product, based on the essential design outputs of the device and the risk the device poses if specified requirements are not met. Confirm as necessary that supplied product was evaluated as to the effect on the essential design outputs. Additionally, verify that the appropriate acceptance activities were implemented, based on the potential effect the supplied product poses to the essential design outputs.

Organizations are required to determine, collect, and analyze appropriate data to demonstrate the ability of suppliers to provide acceptable product. During your audit of the Measurement, Analysis and Improvement process, confirm that analysis of supplier performance data from evaluation and monitoring supplier process activities has been performed and considered for corrective or preventive action when necessary.

12. Determine, based on the assessment of the overall purchasing, whether management provides the necessary commitment to the purchase process.

Clause and regulation: [ISO 13485:2016: 4.1.3, 4.1.5, 5.2; RDC ANVISA 16/2013: 2.2.1; MHLW MO169: 5, 11]

Medical Device Single Audit Program

Annex 1

Audit of Technical Documentation

1. Purpose

The requirements for Auditing Organizations in IMDRF/MDSAP WG/N3FINAL:2016 (Edition 2) include, to the extent possible during on-site audits and in accordance with the applicable regulatory system, aspects of evaluation including:

- product/process related technologies (e.g. injection molding, sterilization); and
- evidence of adequate product technical documentation in relation to relevant regulatory requirements.

It should be noted that:

- IMDRF/MDSAP WG/N3FINAL:2016 (Edition 2) does not provide additional requirements for product certification (ISO/IEC 17065:2012) or the requirements of product testing (ISO/IEC 17025:2005).

- The following is explicitly excluded from the scope of IMDRF/MDSAP WG/N3FINAL:2016 (Edition 2) due to the lack of regulatory convergence:

    - the premarket reviews (e.g. Design Dossier Examinations, Premarket Applications, Shounin Applications, Product Registration/Notifications) typically performed by product specialist(s); and,
    - the final decisions of safety and performance/effectiveness of a medical device made by any Regulatory Authority.

2. Definitions

Technical Documentation:

Documented evidence, normally an output of the quality management system (QMS), which demonstrates compliance of a device to the regulatory requirements for products and processes.

(Adapted from IMDRF/ MDSAP WG/ N3FINAL:2016 (Edition 2) – Section 3.5)

Technical Expert:

An individual who carries out the following functions at an Audit:

- evaluation of product/process related technologies;
- evaluation of Technical Documentation;
- evaluation of compliance with Regulations.

(IMDRF/ MDSAP WG/ N3FINAL:2016 (Edition2) – Table 1) MDSAP Requirements

The following are the relevant requirements for MDSAP from IMDRF/ MDSAP WG/ N3FINAL:2016 (Edition 2) and ISO13485:2016.

IMDRF/ MDSAP WG/ N3FINAL:2016 (Edition 2)

Clause 7.1.2 - An Auditing Organization shall have access to the necessary administrative, technical, and scientific personnel with technical knowledge and sufficient and appropriate experience relating to medical devices and the corresponding technologies.

Clause 7.1.5 - An Auditing Organization shall be capable of carrying out all the tasks assigned to it with the highest degree of professional integrity and the requisite technical competence in the specific field, whether those tasks are carried out by the Auditing Organization itself or on its behalf and under its responsibility.

Clause 9.2.4 - Stage 2 audit objectives shall specifically include evaluation of:
- the effectiveness of the manufacturer's QMS incorporating the applicable regulatory requirements;
- product/process related technologies (e.g. injection molding, sterilization);
- adequate product technical documentation in relation to relevant regulatory requirements; and,
- the manufacturer's ability to comply with these requirements.

Clause 9.3.2 - Surveillance audit objectives during the audit cycle shall specifically include evaluation of the effectiveness of the manufacturer's QMS incorporating the applicable regulatory requirements and the manufacturer's ability to comply with these requirements. In addition:
- new or changed product/process related technologies (e.g. injection molding, sterilization); and
- new or amended product technical documentation in relation to relevant regulatory requirements.

Clause 9.4.1 - Recertification audit objectives shall specifically include evaluation of:
- the effectiveness of the manufacturer's QMS incorporating the applicable regulatory requirements;
- product/process related technologies (e.g. injection molding, sterilization);

- adequate product technical documentation in relation to relevant regulatory requirements; and
- the manufacturer's continued fulfillment of these requirements.

ISO13485:2016

Clause 4.2.3 – Medical Device File

For each medical device type or medical device family, the organization shall establish and maintain one or more files either containing or referencing documents generated to demonstrate conformity to the requirement of this International Standard and compliance with applicable regulatory requirements.

The content of the file(s) shall include, but is not limited to:

a) general description of the medical device, intended use/purpose, and labelling, including any instructions for use;

b) specifications for product;

c) specifications or procedures for manufacturing, packaging, storage, handling and distribution;

d) procedures for measuring and monitoring;

e) as appropriate, requirements for installation;

f) as appropriate, procedures for servicing.

Clause 7.3.10 - Design and development files

The organization shall maintain a design and development file for each medical device type or medical device family. This file shall include or reference records generated to demonstrate conformity to the requirements for design and development and records for design and development changes.

3. Assessing Technical Documentation

The Medical Device File (ISO13485:2016 Cl 4.2.3) and the Design and Development Files (ISO13485:2016 Cl 7.3.10) are to contain or reference documents to demonstrate compliance with requirements for design and applicable regulatory requirements. For

compliance with the requirements of N3(Ed2) these records should contain product technical documentation that includes, but not limited to:

- Outputs from the design and development process, such as: design outputs, design verification data with acceptance criteria, design validation data with acceptance criteria, a risk management file, human factors analysis, software validation etc.),
- Inputs to the production and service controls process, such as: device production specifications including appropriate drawings, composition, formulation, component specifications, and software specifications;
- Specifications for a production processes including the appropriate equipment specifications, production methods, production procedures, and production environment specifications;
- Quality assurance procedures and specifications including acceptance criteria and the quality assurance equipment to be used;
- Specifications for packaging and labeling, including methods and processes used;
- Procedures and methods for installation, maintenance, and servicing; and
- Jurisdiction-specific statements (such as a declaration of conformity, statement on the presence of specific substances, essential principles checklist, etc.)

The information may be a compilation of documented information or, if the documents constituting the technical documentation are maintained separately, may be a summary that includes an explicit reference to each of these documents.

Auditors are not expected to fully evaluate the data that substantiates the final decisions of safety and performance/effectiveness of a medical device made by any Regulatory Authority. However the auditor is expected to apply the MDSAP model for the review of Technical Documentation when auditing:

- the Design and Development Process (See Audit Task #3 and following, in chapter 5 of documents MDSAP AU P0002 – Audit Model, and MDSAP AU G0002.1 – Companion Document),
- the Production and Service Controls Process (See audit task #16, in chapter 6 of documents MDSAP AU P0002 – Audit Model, and MDSAP AU G0002.1 – Companion Document); and
- the Jurisdiction-specific statements identified in the Device Marketing Authorization and Facility Registration Process (See audit task #2, in chapter 2 of documents MDSAP AU P0002 – Audit Model, and MDSAP AU G0002.1 – Companion Document).

The Audit Model requires the auditor to select design documentation and manufacturing process documentation for review. The selection is to be based on information collected earlier in the audit, and taking into account the risks (risk classification) associated with the device, the novelty of technology used in the device and the associated manufacturing processes or sterilization methods, along with any changes to the device or associated manufacturing processes that have been implemented by the manufacturer since the last on-site audit, including non-reported changes controlled under the QMS. A minimum of one review should be undertaken per audit. Additional reviews may be undertaken if time permits or the auditor suspects that the technical documentation previously reviewed is not a representative sample. (See tasks #2 in chapters 5 and 6).

A technical documentation review is required at least at initial and recertification audits to verify that the manufacturer has established evidence of conformity with regulatory requirements. Surveillance audits should also confirm that the manufacturer has arrangements in place to maintain the currency of the technical documentation for all devices. For example:

- a procedure for reviewing the currency of relevant standards and conducting gap analyses as required;
- a requirement to assess design changes and the need for further technical testing; and,
- a plan for post-market clinical trials, where necessary, or periodic literature reviews.

The following table summarizes the tasks that an MDSAP auditor will use to review information that constitutes the Technical Documentation.

Information	Audit Model: Process, Task#
Medical device general description, including variants and accessories	Design and Development, task #5, 7
Information that confirms that design and development outputs for the product are traceable to, and satisfy, design input requirements	Design and Development, task #7
Intended use, and indication of use, of the medical device	Design and Development, task #5, 7, 10, 11

Labelling, (i.e. information that accompanies a medical device that is located on the device, its packaging, the instructions for use and in promotional material)	Design and Development, task #1, 7, 8, 16
Confirmation that the product is a medical device	Device Marketing Authorization and Facility Registration, task #1 Design and Development, task #5
Classification	Device Marketing Authorization and Facility Registration, task #1 Design and Development, task #5
Risk management file	Design and Development, task #8
Pre-clinical data (studies in animal models, testing to support compliance with relevant standards, technical performance tests etc.)	Design and Development, task #10
Clinical evidence	Design and Development, task #11
Manufacturing processes	Design and Development, task #7, 16 Production and Service Controls, task #3, 16
Process validation	Design and Development, task #16 Production and Service Controls, task #7, 8, 9

Evidence of compliance with specified regulatory requirements for products or processes.[1]	Device Marketing Authorization and Facility Registration, task #1
Declaration of conformity[2]	Device Marketing Authorization and Facility Registration, task #1

Note: this table may not exhaustively cover all information expected under all jurisdictions.

Auditors are expected to verify:

- the existence and the coherence of the information listed in this table;
- the applicability of this information to the medical device subject to marketing authorization;
- that the methods implemented throughout the Design and Development to generate this information are sound and commensurate to the risk associated with the medical device;
- that conclusions are substantiated.

Although the auditors are not expected to make final device safety and effectiveness decisions based on a review of technical documentation, if an auditor suspects that device safety and effectiveness concerns exist, or that the evidence supporting compliance with safety and effectiveness requirements is lacking, the concerns should be explicitly described in the audit report. If a public health threat is suspected, an early awareness communication notice ("MDSAP 5-day Notice") must be submitted according to MDSAP AU P0027.001 Post-Audit Activities and Timeline Policy.

The depth and extent of this review should be commensurate with the classification of the medical device, the novelty of the intended use, the novelty of the technology or construction materials, and the complexity of the design and/or technology.

[1] Australia - Essential Principles, Canada - Safety and Effectiveness Requirements

[2] For Australia

4. Expectations from participating Regulatory Authorities

Each participating regulator may have different requirements for the review of technical documentation and for the assessment of the adequacy of that technical documentation at audit.

If inadequacies are identified, nonconformities should be raised in the normal manner, using the most specific and relevant clause of ISO13485, [see especially ISO 13485:2016 §4.2.3 and §7.3.10] including those raised against technical documentation under country specific requirements [see ISO 13485:2016 §4.2.1.e, §7.2.1.c or §7.3.3.b]. Refer GHTF SG3 N19 for further guidance on the grading of nonconformities. NCs from the review of technical documentation shall be included in the Nonconformity Grading and Exchange Form (MDSAP AU F0019.2)

Further guidance on the expectations for the evidence of compliance with regulatory requirements is provided in the following sections.

4.1. Australia – TGA

The assessment of product requirements for Australian Class I (supplied sterile), I (with a measuring function), IIa and IIb medical devices, and Class 1-3 IVDs, is performed by the regulator on a sampling basis prior to market authorization; hence technical documentation review is expected to be performed in the context of audit to increase the pool of sampled devices and strengthen the sampling based approach. Technical documentation review should take into consideration the provisions of IMDRF/MDSAP WG/N3 – 9.3.1. This documentation shall contain sufficient detail to allow for an evaluation of the data and for the purpose of demonstrating:

- fulfillment of the requirement; or
- where an appropriate standard exists, fulfilment of the requirements of the relevant Standard that the manufacturer has chosen as the means for demonstrating compliance with regulatory requirements for products and processes

In the case of Class III, Active Implantable and Class 4 In Vitro Diagnostic medical devices that have been subject to a Design Examination separately from the QMS audit, the on-site audit should ensure that the technical documentation for these devices is maintained.

The technical documentation should contain, or reference, evidence of compliance with the Essential Principles and the following requirements. An Essential Principles

checklist[3], although not mandatory, is often used as an index to identify the applicable Essential Principles, any standard or validated method that has been used to demonstrate compliance, and a reference to the document that contains the evidence of compliance. The assessment of each set of technical documentation selected for compliance with the Essential Principles, as a minimum, should consist of a review of:

- A detailed description of the product, including the intended use, intended user, risk classification and assigned Global Medical Device Nomenclature (GMDN) code. For IVD medical devices, the description should also include specimen types, a list of kit components, methodology and any instrumentation to be used;
- an index of the compilation of documents, or if documentation is not collated, a reference to the relevant documentation;
- a risk management file (e.g. select a particular risk and confirm that it has been managed in accordance with the requirements of ISO 14971);
- selected report(s) of pre-clinical data and/or bench testing (including studies in animal models, testing to support compliance with relevant standards, technical performance and safety tests for electrical safety, mechanical safety, radiation safety etc.) identified by the manufacturer as evidence of compliance with relevant Essential Principles;
- a selected clinical evaluation report to confirm that it is current and was prepared by an appropriately qualified expert ;
- any other documentation required for the type of device (e.g.- special requirements for devices incorporating medicinal substances or materials of animal origin);
- the information that accompanies a device (labelling, instructions for use);
- the declaration of conformity (this may be in a draft form for development devices that do not have marketing authorization).

4.2. Brazil – ANVISA

Brazilian regulations require that product registration/market authorization is entirely performed by ANVISA for all medical device classes.

ANVISA expects that the Auditing Organization follows the Audit Model for reviewing technical documentation, including the Brazilian specific requirements defined in the document MDSAP AU P0002.003 – Audit Model. There are no additional requirements to be reviewed during an MDSAP audit.

[3] For reference, manufacturers may choose to complete an Essential Principles Checklist as one way of indexing their evidence of conformity to requirements. The checklist is not mandatory however it provides a succinct way of identifying the relevant evidence. A sample template is available at http://www.tga.gov.au and by searching for “Essential Principles Checklist”

4.3. Canada - Health Canada

The Medical Devices Bureau, Health Canada has assigned the responsibility for the review of technical documentation to the Devices Evaluation Division. For Health Canada the objective of the audits conducted by MDSAP Auditing Organizations is to determine that manufacturers who intend to license their devices in Canada have implemented a QMS in conformity with the requirements of the international standard ISO 13485 and Part 1 of the Canadian Medical Devices Regulations. Similarly a holder of a medical device license is to maintain an effective QMS. Health Canada expects Auditing Organizations to confirm during their audits that the manufacturer maintains evidence of safety and effectiveness and not to make a determination that the devices are safe and effective.

4.4. Japan – MHLW/PMDA

The assessment of product requirements is performed prior to market authorization by the regulator or registered certification bodies, hence technical documentation review, as assessment of conformity to the Essential Principles of Safety and Performance of Medical Devices, is not performed in the context of MDSAP audit.

4.5. USA – FDA

The US medical device regulations do not require a technical documentation as defined in the present document, although most data composing the technical documentation are direct output of the Design History File (820.30(j) and the Device Master Record (820.181).

Medical Device Single Audit Program

Annex 2

Audit of Requirements for Sterile Medical Devices

Overview:

The control of the sterility of a medical device is the result of a series of controlled processes including (but not limited to):

- Design and Development:
  - device cleanliness and sterility requirements
  - compatibility of the device with the sterilization process
  - transport, storage, and presentation of the device at point of use
  - compatibility of the device packaging with the sterilization process
  - ability of the device to be sterilized or re-sterilized
  - shelf-life and device life user requirements
  - rationale for adding the device to a product family covered by a validated sterilization process
- Production and Process Controls, as applicable:
  - process validation of the cleaning, sterile barrier packaging, and sterilization processes
  - routine monitoring and measurement of the cleaning, packaging and sterilization processes
  - routine acceptance criteria of the cleaning, packaging and sterilization processes
  - (re-)qualification, (re-)verification, (re-)calibration and maintenance of the cleaning, packaging and sterilization equipment
  - environmental control of production areas (cleanroom design and monitoring)
  - storage of device parts, components, and packaging material
  - storage of finished sterile product and management of shelf life
  - handling process of non-sterile device for re-sterilization
  - lot / batch release of terminally sterilized devices
- Purchasing, depending on the purchased product or service:
  - Determination of criteria the supplier must meet to be selected, with regards to the control of the sterility of the device
  - Selection and monitoring of suppliers considering the identified criteria
  - Purchasing information
  - Verification of the purchased product/service (and associated documentation)

Therefore, the audit of the control of the sterility of a medical device requires a holistic approach.

Competencies:

It is up to the Auditing Organization to determine the competencies required to achieve the audit objectives and to assign a competent audit team. However, the AO should identify auditors and/or technical experts having the competencies identified below. The subsequent table identifies the competencies required to audit various aspects of sterilization.

The auditing of activities and processes contributing to the sterility of a medical device may involve the following competencies:

- **Microbiology**: Ability to assess the validation of sterilization processes and methods regardless of the availability of an established standard (or the lack of such a standard). Ability to assess the validation of environmental and microbial contamination controls. Ability to assess the validation of packaging activities and sterile barrier systems. A person deemed to have this competency would likely be educated as a medical microbiologist.
- **Packaging and Sterile Barrier Systems:** Ability to assess the validation of activities and processes for packaging and sterile barrier systems.
- **Environmental and Contamination Control**: Ability to evaluate the adequacy of environmental and microbial contamination control programs.
- **Routine Sterilization**: Ability to assess the validation of sterilization processes and methods where an existing established standard on the method exists other than aseptic processes. Ability to verify the implementation of non-standard sterilization activities and processes previously audited by someone having the microbiology competency. Ability to assess the implementation of activities and processes for packaging and sterile barrier systems previously audited by someone having the packaging and sterile barrier systems or microbiology competency. Ability to assess the implementation of environmental and microbial control activities previously assessed by someone having the microbiology or environmental and contamination control competency.

An auditor may possess several of these competencies

The following table summarizes the competencies required to audit the requirements for sterile medical devices:

Topic being evaluated	Microbiology	Packaging and Sterile Barrier Systems	Environmental and contamination control	Routine Sterilization
Sterilization process (re)validation according to well-established standards (excluding aseptic processes)	✓			✓
Sterilization process (re)validation according to less common standards, or using less common sterilant, sterilization technologies, validation methods (including aseptic processes)	✓			
Packaging process validation and sterile barrier systems	✓	✓		
Environmental and microbial contamination controls	✓		✓	
Routine implementation of sterilization processes according to previously audited	✓			✓

validated processes				
Routine implementation of environmental controls and monitoring (including maintenance)	✓		✓	✓
Routine implementation of packaging activities according to previously validated processes	✓	✓		✓

Audit of the Requirements for Sterility and Audit Cycle Considerations:

All ISO 13485 and regulatory requirements for sterile medical devices must be audited at least once during the certification cycle. While Auditing Organizations have flexibility in deciding when these requirements are audited during the certification cycle, they should ensure that the requirements for sterility of a device have been audited before including this device in the scope of certification.

All sterilization methods used by a manufacturer should be covered throughout the certification cycle.

Objectives for the audit of requirements for sterile medical devices should include, but not be limited to, verification that:

- all processes that contribute to a device's sterility are controlled through the organization's QMS and validation has been completed, where applicable (e.g. cleaning, disinfection, aseptic processing, sterile barrier systems, terminal sterilization, storage)
- criteria for re-validation are defined and are followed, (e.g. at defined periodicity, following significant changes and trends)
- processes are implemented and monitored to ensure compliance to their validated parameters
- routine environmental and product cleanliness controls are implemented and monitored
- results are consistent from batch to batch

- batch records(e.g. a device history file) are maintained for each sterilization batch per an approved device master record
- lot release is performed for each batch according to a procedure and by a designated person
- adequate control of suppliers is observed where sterilization is outsourced (process for selection of critical suppliers defined and followed, valid agreements, supplier audits, etc.)

In the absence of significant changes with potential impact on the validated status or new (re)validation activities since the previous audit, the audit should be focused on records review to determine that the validated processes are followed, monitoring is performed, batch records are maintained.

While some aspects may be audited remotely (e.g. review of sterilization process validation documentation), the audit of requirements for sterile medical devices must be conducted on-site.

The outcome of such remote review activities must serve as input to the on-site audit and be incorporated or attached to the MDSAP audit report. The off-site assessment of the controls of the product sterility should not prevent the on-site audit team from following audit trails, including audit trails necessitating the review of documents that had previously been assessed remotely.

The audit of processes for validation of sterilization and sterile barrier systems performed according to well-established standards (e.g. steam sterilization, 25 kGy gamma irradiation, Ethylene Oxide in chambers with traditional release) can be performed by someone having either the microbiology competency or the routine sterilization competency.

The audit of a validation performed according to less common standards, or using less common sterilant/sterilization technologies/validation methods (e.g. Ethylene oxide sterilization in a bag, ethylene oxide in chambers with parametric release, plasma sterilization, low dose gamma sterilization) should be performed by a person having the microbiology competency This also applies to the evaluation of aseptic process validation or to the sterilization process validation of the microbiologic safety of devices incorporating substances, cells, tissues of animal or human origin.

Routine implementation of sterilization processes according to previously audited validation studies may be conducted by a person having the routine sterilization competency. This applies to all previously validated and audited sterilization processes including processes conducted according to less common standards, or using less common sterilant/sterilization technologies/validation methods.

If the requirements for sterile medical devices are audited separately by a competent auditor or technical expert, this shall cover all the applicable requirements and the results of this audit shall be part of the MDSAP audit report. This must not prevent the MDSAP audit team from following leads relative to requirements for sterile medical devices.

Medical Device Single Audit Program

Summary of Changes from Prior Revision

General

- References to ISO 17021:2011 Conformity assessment – Requirements for bodies providing audit and certification of management systems have been replaced throughout with ISO 17021-1:2015 and clause numbers updated.
- References to ISO 13485:2003 Medical Devices – Quality management systems – Requirements for regulatory purposes have been replaced throughout with ISO 13485:2016 and clause numbers updated.
- Regulations of specific regulatory authorities have been updated as needed.
- The Unique Device Identifier (UDI) requirements for the U.S. Food and Drug Administration have been added to the appropriate sections of the MDSAP Audit Model.

Audit Model Introduction

- "Audit Sequence" paragraph regarding outsourcing design and/or manufacturing has been revised to better align with the third paragraph of clause 1 of ISO 13485:2016.
- "Navigating the Audit Sequence" paragraph includes performing pre-audit preparation and review, to the extent practical, to maximize efficiency during the on-site portion of the audit.
- "MDSAP Audit Cycle" in terms of the initial certification, surveillance, and unannounced audits has been clarified regarding expectations of the regulatory authorities and to align with IMDRF MDSAP WG/N3: 2016. A statement was added to stress that during the course of the audit cycle, all product families and significant processes should be assessed. Additionally, expectations for the audit of processes for devices intended to be sterile was added.

Management Process

- Task 1 has been completely revised to reflect the requirement in ISO 13485:2016 for identifying the organization's roles under applicable regulatory requirements and for quality management system planning.
- Task 6 has been revised to remove the additional country-specific requirement for the United States to verify that resources include the assignment of trained personnel to meet the requirements of 21 CFR Part 820, including management, performance of work, assessment activities, and internal quality audits.
- Task 8 now contains clarifying text that document and record controls apply to documents and records of both internal and external origin, and an additional country-specific requirement for the United States to confirm that electronic document and record systems are backed-up.

- The requirement to verify that management review procedures have been documented was moved from task 1 to task 9.
- Task 10 has been rewritten to eliminate redundancy with the Device Marketing Authorization and Facility Registration Process.

Device Marketing Authorization and Facility Registration Process

- Task 1 has been revised to include a note, regarding the responsibilities of importers / marketing authorization holders / Sponsors.
- Task 2 has been updated regarding the country-specific requirements for Australia to verify that the manufacturer maintains a list of their Australian Sponsors and the products those Sponsors have included in the Australian Register of Therapeutic Goods.

Measurement, Analysis and Improvement Process

- The specific requirement for Brazil regarding ensuring that information about quality problems or nonconforming products is properly disseminated has been moved from Task 13 in the prior version of the MDSAP Audit Model to Task 1.
- Task 2 has been updated to include a statement that the auditor should confirm that data is accurate and analyzed according to a documented procedure for the use of valid statistical methods. Additional country-specific requirements requiring procedures for identifying valid statistical techniques have been removed, as procedures for identifying valid statistical techniques have been included in ISO 13485:2016, clause 8.4.
- Task 8 has been updated to include the statement to confirm that an appropriate disposition was made, justified, documented and that any external party responsible for the nonconformity was notified, and to remove the additional country-specific requirements for Brazil and the United States to confirm that the evaluation of non-conforming product includes a determination of the need for an investigation and notification of the persons or organizations responsible for the nonconformance.
- Task 9 has been updated to move the additional country-specific requirement for Brazil to verify that the manufacturer has procedures to determine the product recall and other field actions that are relevant in the case of products already distributed to task 15.
- Task 10 has been updated to remove the additional country-specific requirements for Brazil and the United States regarding verifying that resources include the assignment of trained personnel for performance of work, assessment activities, and internal quality audits.
- Task 11 has been updated to remove the additional country-specific requirement for Brazil to confirm that relevant information about quality problems is identified and corrective and preventive actions are submitted to executive management for information and monitoring, as well as the competent health authority.

- Task 12 contains clarifications for requirements for investigations and the

responsibility for recalls as pertaining to Australian regulatory requirements and to add the requirements for Unique Device Identifier for the United States.

- Task 13 has been updated to remove the additional country-specific requirements for Brazil and the United States regarding verifying that information related to quality problems or nonconforming product is disseminated to those directly responsible for assuring the quality of such product or the prevention of such problems. The Brazilian requirement is also included in task 1.
- Task 15 has been updated to include a statement to confirm that reporting of advisory notices is established in a documented procedure and performed according to the applicable regulatory requirements.

Medical Device Adverse Events and Advisory Notices Process

- Task 1 has been updated to include additional clarifying text for the Australian requirements for manufacturers and Sponsors regarding written agreements between the Sponsor and the Manufacturers regarding reporting requirements and timeframes.
- Task 2 has been updated to include clarifying text for the Australian requirement regarding written agreements between the manufacturer and Sponsors regarding compliance with recall requirements and timeframes.

Design and Development Process

- Task 1 has been revised regarding the additional country-specific requirements for Australia pertaining to the availability of procedures for design and development in situations when a manufacturer applies TG(MD)R Regs Division 3.2 and selects the Full Quality Assurance conformity assessment procedures [TG(MR)R Schedule 3, Part1]. In addition, for all classes of devices, the guidance provided for the audit of technical documentation in Annex 1 is to be followed to ensure the availability of objective evidence that demonstrates compliance with the Essential Principles of Safety and Performance.
- Task 7 has been updated to include additional text regarding medical device specifications as an output of the design and development process to include specifications for the sterilization process, when applicable.
- Task 10 has been updated to remove the additional country-specific requirements for Brazil and the United States regarding verifying that design validation has been performed on initial production units, lots, or batches, or their equivalents.
- The additional country-specific requirement for Brazil task 16 has been modified to better align with the translated version of RDC 16/2013.

Production and Service Controls Process

- Task 1 has been updated to include requirements for unique device identifier in planning for product realization. The additional requirement for the United States has been added to confirm that the organization has determined the applicability

of unique device identifier requirements per 21 CFR 801 and 21 CFR 830, has obtained the unique device identifiers from an FDA-accredited UDI-issuing agency, and the required data elements have been entered in the Global Unique Device Identification Database (GUDID) [21 CFR 801, 830].

- Task 3 has been updated regarding the additional country-specific requirement for Brazil to determine whether the manufacturer has established and maintained a procedure for change control in order to track changes in auxiliary systems, software, equipment, processes, methods or other changes that may affect the quality of products, including risk assessment within the risk management process. This task was moved to the Management process task 1 as a linkage.
- Task 5 has been updated for the country-specific requirement for Brazil. With the revision of ISO 13485 to the 2016 version, clause 6.3, only the portion of the Brazilian requirement for people flow remains as a country-specific task.
- The additional country-specific requirement for Brazil in Task 7 was updated to reflect the English translation of RDC 16/2013. Additionally, the country-specific requirement for Canada to verify that sterilization methods for devices sold in a sterile state have been validated was removed.
- Task 8 has been updated in accordance with changes to ISO 13485, clause 7.5.6. It is now required for organizations to not only validate processes that cannot be fully verified, but now there is a requirement to validate processes whose result can be verified, but is not. Additional country-specific requirements for Brazil and the United States were removed from this task because the requirements are included in clause 7.5.6 of ISO 13845: 2016.
- Task 11 has been updated to include a statement to verify that the processes used in production and service are appropriately controlled, monitored, operated within specified limits and documented in the product realization records, and to remove additional country-specific requirements for Brazil and the United States regarding monitoring of processes and use of statistical techniques because they are covered in clauses 7.1 and 7.5.1 of ISO 13485:2016.
- Task 16 has been updated to include a statement to determine if the manufacturer has established and maintained a file for each type of device that includes or refers to the location of device specifications, production process specifications, quality assurance procedures, traceability requirements, and packaging, labeling specifications, and when applicable requirements for installation and servicing, in order to allow for the exclusion of the Brazilian requirement from task 16 of the design and development process.
- Task 17 was updated to include a statement regarding ensuring the requirements for product release were met and documented, and to include the Unique Device Identifier requirements for the United States.
- Task 24 has been updated to remove the additional country-specific requirements for Brazil and the United States regarding packaging, dispatch of products from stock rooms, and ensuring purchase orders are reviewed before fulfillment. These requirements are largely now included in clauses 7.5.8 and 7.5.11 in ISO 13485:2016.
- Task 27 has been updated to include the requirements for Unique Device Identifier for the United States.

Purchasing

- Substantial changes were made to the MDSAP Purchasing Process to consolidate tasks.
- Task 4 has been updated to include a statement to verify that criteria for the selection, evaluation and re-evaluation of suppliers have been established and documented to allow for consolidation of tasks 4 and 5 from the previous version of Audit Model and to allow the Brazilian-specific requirements to be excluded from task 7.
- Task 5 has been updated to include a statement to verify that records of supplier evaluations are maintained to allow for the consolidation of this task with task 7 in the previous versions of the MDSAP Audit Model.
- Task 8 has been updated to include a statement to verify that written agreement with the supplier is established in which suppliers has to notify the organization about changes in the product in accordance with clause 7.4.2 of ISO 13485: 2016 and to exclude Brazil specific requirement from task 9.
- In order to consolidate task 9 with task 12 of the previous revision of the MDSAP Audit Model and Companion Document, task 9 was revised to verify that the organization documents purchasing information, including where appropriate the requirements for approval of product, procedures, processes, equipment, qualification of personnel, sterilization services, and other quality management system requirements and to confirm that documents and records for purchasing are consistent with traceability requirements where applicable. The additional country-specific requirements for Brazil and the United States were removed since the 2016 revision of ISO 13485; clause 7.4.2 explicitly addresses notification of changes by suppliers.
- Task 10 was updated to include a statement to verify that records of verification activities are maintained to allow for consolidation of this task with task 14 in the prior version of the Audit Model.

Annexes

- Annex 1 - Audit of technical documentation for the Quality Management System requirements of the Conformity Assessment Procedures of the Australian Therapeutic Goods (Medical Devices) Regulations (TG(MD)R Sch3).
- Annex 2 - Expectations for audit of sterilization processes.